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OF THE
UNIVERSITY OF WISCONSIN

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BULLETIN OF THE UNIVERSITY OF WISCONSIN

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ECONOMICS AND POLITICAL SCIENCE SERIES, VOL. 8, No. 1, PP. 1-178

THE FINANCIAL HISTORY OF KANSAS

BY

JAMES ERNEST BOYLE

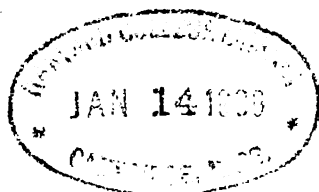
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PREFACE

I have used the words "financial history" in a somewhat broad sense. The subject includes, as I have treated it, a consideration of both state and local finances. The word municipality, as used throughout this discussion, applies to any local division of the State, whether a county, township, school district or city. These terms are defined here at the outset, since usage has not yet established uniform meanings for them.

The aim of this work is similar to that of any other standard history, namely, to report and explain facts. It is an attempt, therefore, to trace as faithfully as possible the financial history of the State. Events bearing directly and indirectly on the financial life of the State are narrated and with as little trespassing as possible on the domain of political history. However, financial causes are not divorced from their effects, whether these effects be political, social or economic.

The arrangement of the work is according to the topical and chronological requirements of the subject-matter. An appendix is given at the end, containing valuable statistical data, only part of which appear in the body of the work. A bibliography is also added, showing the sources of information.

Itemized receipts and expenditures have not been tabulated in the usual form, the state system (or rather, lack of system) of accounting rendering such a tabulation useless.

JAMES E. BOYLE.

Madison, Wis., April, 1904.

THE FINANCIAL HISTORY OF KANSAS

CHAPTER I

INTRODUCTORY

The financial history of Kansas has a bearing on practical life which makes it distinctively a live question. This is true for several reasons. A large part of the social income of the State is now used annually to meet the growing expenditures of the State and local divisions. While the resources of the State have increased both in amount and variety, the financial system has maintained that primitive form adapted to a simplicity which no longer exists. This means inevitable injustice, and that for very obvious reasons. For in the early days of the State, land constituted the bulk of the wealth, with a meager showing of personal property. But today, in contrast with this simplicity, we have an almost hopeless complexity, represented by our corporations, manufacturing establishments, mines, transportation companies, municipal franchises, interurban car lines, etc. This complexity in the economic life of the people has increased with sweeping rapidity, while lack of any and all supervising authority in the tax system has caused the doubtful reforms in it to come limping many years behind actual needs. This has augmented certain injustices and developed certain tendencies in the matter of placing the brunt of the burden of taxation on the holders of the simple visible property of the early days of the constitution. And it is a fact too well known to be disputed that the real significance of the burden of taxation is not the size of the burden, but the justice and equity of it. For, as historians have pointed out, our Revolutionary fore-

fathers rebelled, not at the weight of the taxes on them, which was small, but at their unfairness and injustice. If justice ever existed in Kansas' scheme of taxation, time and change have wrought sad havoc with it, as it is one purpose of this history to show. While there have been no dramatic frauds to mar the financial history of Kansas, and while, in comparison with the financial administrations of great cities like New York, Philadelphia, St. Louis, and Minneapolis, the finances of Kansas have been administered with virtuous honesty, yet the plain, simple question of justice makes the issue not only a live one, but one compelling attention. For the development of wealth along new lines has brought with it an intricate tangle of methods in the taxing system which is hopelessly confusing to the general public. A few initiated ones are in a position to take advantage of this situation, and hence form a privileged class, escaping with mere nominal burdens. And, therefore, it is true that these haphazard methods in the long run give rise to well-intrenched abuses which are more pernicious than the short-lived but more glaring frauds. This breeds discontent and suspicion among the people, as is amply shown by the large number of investigations and impeachments connected with the administration of the public funds. In one year expenditure for these investigations of alleged malfeasance in office ran up to \$35,000. There has never been wanting a class, consisting largely of demagogues, who have stood ready to raise the hue and cry of "Fraud;" "Investigate." And hence it is that flagrant frauds have not been perpetrated, but only lesser ones, while the growing evil of injustice has been fastening itself on the fiscal system.

On the whole, then, since the financial system rests on direct taxation, it is a live issue, because taxation has important economic, social and fiscal effects. It modifies the distribution of wealth for the advantage or disadvantage of those concerned; it either promotes the public welfare or works injustice and oppression; and it may embarrass the treasury with too little or too much revenue. These are the facts of taxation today, as common observation will teach, and not its mere potentialities.

Taxable capacity of the State.—A brief survey of the present resources of the State will give a clear understanding of its taxable capacity and will suggest some of its fiscal problems.

Kansas is one of the great agricultural states of the Mississippi valley. The State has an area of 81,700 square miles, or 52,288,000 acres. The population in 1900 was 1,470,495; that is, 18 persons to the square mile, or one person for every 36 acres. At the time of admission into the Union, the Indians held about 10,000,000 acres of land, but their holdings now (1904) are only 105,000 acres. Railroad holdings, once a little over 9,000,000 acres, are now about 1,000,000. There are about 1,000,000 acres, the title to which still vests in the Federal Government. That leaves some 50,000,000 acres of soil, now supposedly used productively in agriculture, grazing and other industries. But in its agricultural conditions, the western part of Kansas differs very much from the eastern. The divergence is marked in the elevation, soil, and rainfall.¹ That portion lying west of the 100th meridian, and some parts extending east of it, belong to the semi-arid or short grass region, where irrigation is necessary for the successful cultivation of most crops. These facts were not known early enough and hence much distress and many failures have occurred in the development of this section. The history of this irrigation in Kansas has been marked by a number of disastrous failures. "Most of them," according to the federal census report,² "resulted from a lack of knowledge of the climatic oscillation in the sub-humid regions, and from a fever of speculation in western mortgages. During a cycle of wet years agriculture was extended far into the Plains region. The movement westward was greatly facilitated by companies which were formed to place loans and to take mortgages on real estate, the funds being obtained from the East. As long as the rainfall continued abundant, the profits of these loan agencies were great and the competition became so keen that ordinary prudence was thrown aside. When a series of dry years came, and no crops were made season after season, the land owners abandoned their farms, leaving whole counties practically deserted. The loan companies foreclosed their mortgages and became possessors of large tracts of land which were comparatively valueless.

¹ *Census Bulletin*. 12 Census, No. 192, p. 13.

² *Census Bulletin*. 12 Census, No. 192, p. 13, 14.

"These ditches and canals have never given adequate returns upon the large investments, owing to the fact that no study had been made of the volume of water in the streams, or of any of the important conditions relating to the diversion of water from them. In order to make their property marketable, the corporations organized new companies, sold stock, and in the southwestern part of the State constructed some of the largest irrigation canals in the United States. The water supply for most of these ditches was taken from the Arkansas river, but after a few years of drought it proved wholly inadequate for the purpose, and hundreds of miles of ditches had to be abandoned. The principal irrigated areas are along this river, where the conditions are somewhat similar to those along the Platte river in Nebraska. Its broad, shallow channel is dry for a considerable part of the year, but water is seeping beneath the surface of the valley lands as well as under the stream bed. The ditches that are operated at the present time can receive water only in times of flood, and are utilized largely in the cultivation of forage crops.

"The reclamation of large areas of fertile and productive land depends upon the adoption and application of successful methods of utilizing the ground waters, which are found throughout western Kansas at varying depths. A partial solution of this problem has been found in the use of windmills and by building small storage reservoirs. The wind, which in the West has heretofore been regarded as an annoyance and a mischief-maker, is harnessed and becomes a factor in promoting progress and development. Irrigation from windmills is no longer an experiment and today many farmers are depending for their living on the products of orchard and garden tracts irrigated by this means. * * * There has been a large increase in the number of irrigators, but not a corresponding increase in the number of acres irrigated. This is explained by the large increase in the number of farms which irrigate small areas by means of windmills and of water pumped from streams, and by a shortage of water for the ditches operated in 1899."

The total area irrigated in 1899 was 23,620 acres, an increase of 13.5 per cent. over 1889.

Kansas has no large cities. Only 22.5 per cent. of her population live in cities of over 2,500 inhabitants, whereas Iowa has 25.6 per cent. urban population, Missouri 36.3, Colorado 48.3, Ohio 48, New York 72.9, and Rhode Island 95. Nebraska has about the same per cent., 23.7.

Agriculture, therefore, has been the predominating industry. Ranking twenty-second in population, the State is seventh in rank in the gross value of agricultural products. These products amounted to \$209,895,542 in 1900. Iowa ranked first in the same year with a production worth \$365,411,528. The other states outranking Kansas in agricultural products are, after Iowa, Illinois second, Ohio third, New York fourth, Texas fifth and Missouri sixth. The closest rival is Pennsylvania, ranking eighth.

The value of Kansas farm land in 1900, including all improvements, machinery, live stock and other farm property, was \$864,100,286, which gave the State the rank of ninth. Illinois ranked first with her valuation of \$2,004,316,897; followed by Iowa as second, Ohio third, New York fourth, Pennsylvania fifth, Missouri sixth, Indiana seventh, and Texas eighth. The State ranking tenth, or just below Kansas, was Wisconsin. Second in importance to the agricultural wealth of the State are the railroads. There are seventeen of these roads, and one electric interurban, having in all over 8,800 miles of main track and a total mileage, including side tracks, of over 10,000 miles. Comparing this mileage with the country at large, we find that Kansas has 12 $\frac{3}{4}$ miles of road for every 100 square miles of territory, while the whole United States has only 6.82. Kansas has 67.27 miles of line for every 10,000 inhabitants, while the United States has only 25.76. The assessed value of these roads is \$60,000,000. Operating over these roads, and doing a lucrative business are five express companies. Their business being wholly out of proportion to the tangible property they own, makes them a peculiarly difficult subject of taxation. In connection with these express and railroad transportation facilities should be mentioned the growth and prominence of the telegraph, the telephone, and the interurban electric car lines. The sleeping car and refrigerator car business may also well be men-

tioned as adding complexity to the income-producing property of the State.

Manufacturing is rapidly developing in Kansas and bids fair to rival the importance of agriculture, so far as the capital employed in each and the value of the product are concerned. The State ranks seventh in agriculture, but sixteenth in manufacturing: the *per capita* product of the former in 1900 was \$143; of the latter, \$117. The growth and present status of the manufacturing industry can be seen by a glance at the following table:

MANUFACTURING IN KANSAS.³

	1900	1890	1880
Number of establishments.....	7,830	4,471	2,808
Capital invested.....	\$66,827,862	\$48,926,002	\$11,192,815
Value of product.....	\$172,129,898	\$110,219,805	\$30,893,777
Per cent. of population wage-earners in manufacturing.....	2.4 per cent	2 per cent	1.2 per cent

To show the particular lines of development followed by manufacturing in Kansas, seven selected industries are given, in the order of their importance:

1. SLAUGHTERING AND MEAT PACKING.	1900	1890
Number of establishments.....	14	18
Capital invested.....	\$16,486,177	\$11,086,058
2. FLOUR AND GRIST MILLS.		
Number of establishments.....	533	348
Capital invested.....	\$8,366,966	\$7,844,280
3. ZINC SMELTING AND REFINING.		
Number of establishments.....	11	4
Capital invested.....	\$5,218,529	\$218,000
4. CAR SHOPS.		
Number of establishments.....	37	26
Capital invested.....	\$2,981,699	\$1,688,210
5. FOUNDRY AND MACHINE SHOPS.		
Number of establishments.....	94	69
Capital invested.....	\$2,450,324	\$2,624,807
6. DAIRY PRODUCTS MADE IN FACTORIES.		
Number of establishments.....	171	101
Capital invested.....	\$1,139,595	\$438,792
7. SOAP AND CANDLES.		
Number of establishments.....	7	9
Capital invested.....	\$947,182	\$130,379

³ Report on manufacturing. 12 Census.

This is perhaps sufficient to indicate one line of development in the differentiation of Kansas industries. It is plainly one of increasing importance and hence due cognizance must be taken of it. Some of the industries above show a very interesting tendency towards greater concentration.

The business of mining in Kansas is a comparatively new industry, but one of no insignificant proportions. Especially is this true as regards the mining of bituminous coal. A brief record of this may be tabulated from the statistical abstracts of the United States.

COAL MINED IN KANSAS.

1880	768,597 tons (2,240 pound-tons)
1890	2,017,788 tons
1895	2,613,277 tons
1900	3,989,170 tons
1901	4,375,471 tons
1902	4,701,844 tons

Zinc mines yield some 100,000,000 pounds of ore annually having a value of one and one-third million dollars; and the product of lead is about 15,000,000 pounds a year, with a value of one-third of a million dollars. Other industries of importance in this class are salt and oil. These are all to be reckoned with in any rational system of taxation which aims to deal fairly with different classes of property.

To complete this representation of the more prominent features of the taxable field of the State, mention must be made of a few forms of personal property. These do not constitute a separate category, strictly speaking, but do not happen to be included in any of the foregoing enumerations. Reference is had to the various forms of intangible personalty, such as mortgages, notes, stocks, bonds, etc., which common observation teaches are becoming every year more important elements of individual property. They constitute a factor in the taxable capacity of the State, and hence will be treated in their proper place. This discussion has not followed the simple division into real and personal property because as a classification it is outgrown and unsatisfactory, and entirely inadequate to present needs.

Having taken this preliminary survey of the field, we are now ready to enter upon the financial history of Kansas.

CHAPTER II

TERRITORIAL FINANCES—1854—1861

The seven years of Kansas' territorial life were a period of storm and stress. It is not necessary at this point to recount the fierce and bloody free-state struggle which culminated in the admission of the State into the Union free from the incubus of slavery. Territorial finances very naturally shared the vicissitudes and uncertainties of the political contest.

The "Organic Act" of Congress in 1854, more generally known as the Kansas-Nebraska bill, provided a territorial government of the usual form for Kansas. Congress, realizing the privations of frontier life, adopted the policy of paying from the national treasury the initial territorial and legislative expenses, the policy of erecting public buildings, appropriating lands for schools and colleges, and of permitting the emigrant to settle upon the public lands free from taxation until a full title should be acquired. The Organic Act empowered the president of the United States to appoint all the officers of the executive and judicial departments of the Territory, and provided for a popular election, at the call of the governor, of the legislative branch, that is, the Council and House of Representatives. The only specific provision concerning finance in the Act was that no tax should be imposed upon the property of the United States, nor should the lands or other property of non-residents be taxed higher than the property of residents. Beyond this, the inhabitants were free to regulate their financial affairs as they saw fit. To equip and start the new government on its way, the president named the necessary appointees, and Congress, in 1855, made an appropriation of \$64,700. Of this sum, \$25,000 was to be used for public buildings; the balance covered the salaries of the executive and judicial officers, contingent ex-

penses, and the expenses of a legislative assembly, census, election of a delegate to the federal House of Representatives, and a territorial library.¹

Kansas, already at this early period, represented two distinct parties—the Pro-slavery and the Free-state. The first election accordingly, called by Governor A. H. Reeder, a man of anti-slavery principles, precipitated a conflict which was destined to cost dearly in both property and human life before it merged into the great national struggle of the Civil war. This first election was carried by voters from Missouri, and the so-called Bogus Legislature came into power, enjoying the favor and sanction of the federal administration.² They moved the seat of government from Pawnee, near the center of the Territory, to Shawnee Mission, a point near the Missouri line, a spot more convenient to the homes of the legislators. This was done in defiance of the governor who had, in accordance with law, chosen the temporary seat of government. This move, the legislators claimed, was forced upon them, for the reason that at Pawnee there was no place of accommodation, and members had to camp out, sleep in their wagons or tents, and cook their own provisions.³ At Shawnee Mission a house was rented and an appropriation made therefor from the contingent fund. An elaborate code of laws, based on the Missouri statutes, was enacted. The objects of taxation, the chapter on revenue declared, should be the support of the government of the Territory, the payment of the public debt, and the advancement of the public welfare.⁴ No further refinements or distinctions were thought necessary. Taxes were to be levied on land and improvements, leaseholds, slaves, and all personalty, including money and credits. And, to put the stamp of their generous spirit on the laws, the legislators provided for the exemption from taxation of the “property of all widows and minors who are not worth more than \$1,000.” As a secondary tax, but what afterwards proved to be

¹ Library, \$5,000; census, \$2,000; election of delegate, \$700; legislative assembly, \$20,000; salaries of governor, three judges, and secretary, \$10,500; contingent expenses, \$1,500; capitol, \$25,000.

² *Report of the Special Committee on the troubles in Kansas*, No. 200. H. R., 34 Cong., 1 Sess. 1856.

³ *Statutes of Ter. of Kansas*. 1 Sess. Legislative Assembly, 1855, p. vi ff.

⁴ *Statutes of 1855*, ch. 137.

the chief source of revenue, there was levied an easily collectible poll tax on men from 21 to 55 years old. This tax varied from 50 cents to \$1, as the need required. Provision was also made for a duty on the proceeds of auction sales, for a license on auctioneers, and for licenses on peddlers of all kinds, book-peddlers alone excepted. These were but minor sources of revenue, however, to the territorial treasury. A fee system was inaugurated, applying to offices where the time and amount of services were uncertain,⁵ such as the district attorney, county commissioners, judge of probate court, clerk of supreme court, clerk of district court, sheriff, coroner, constable, justice of the peace, notary public, and recorder.

A crude form of self-assessment was also provided, whereby the county assessor, chosen yearly by the county tribunal, was to designate a certain point in each township where the people were to come in and hand to him written lists of all their property. It is almost superfluous to add that this impotent system soon fell into disuse.

There was also an interesting section of this revenue law pertaining to the taxation of corporations, typical of all subsequent legislation on this subject by reason of its lumping all corporations together in an undifferentiated mass. The section in question provides for tapping the corporations at the source, rather than the distributed shares of stock. "Persons owning shares of stock," says this law, "in banks and other incorporated companies, taxable by law, are not required to deliver to the assessor a list thereof, but the president or other chief officer of such corporation shall deliver to the assessor a list of all shares of stock held therein, and the names of the persons who hold the same. The tax assessed on shares of stock embraced in such list shall be paid by the corporators respectively."

The sheriff was the collector of revenues for a few years, and then this duty was assigned to the county treasurer. The rate of local taxation was limited to twice the territorial rate on the same subject, and this was meant, of course, to curtail local activities. The fines and penalties in each county were to be applied to the support of the common schools.

⁵ *Statutes of 1855*, ch. 119.

This is, in brief, the crude revenue system which the Bogus Legislature attempted to superimpose upon the young territory. But with a population of only 8,601 souls in the Territory, it is evident that no system could have succeeded in raising much revenue. Each succeeding territorial legislature modified the revenue laws in many particulars and added entirely new sections. Soon territorial and county boards of equalization appear. Exemption was made to apply to \$200 worth of personalty, and to all the property of "persons infirm, old, poor, etc., unable to contribute;" and then a little later only to the property of widows to the amount of \$500. Just debts were to be subtracted from personal property. The matter of exemptions, it is worthy of note, formed one of the most perplexing things for adjustment, not only at this time, but later. The question of the redemption of land sold for taxes was also a much mooted point. This was finally left by the territorial law givers to a three-year limit, with interest at the rate of 25 per cent. on all back taxes paid and other costs incurred by the tax-title purchaser. Other minor points in the revenue laws were changed from year to year, for this process of tampering with the tax laws, once begun, was never discontinued.

The workings of these revenue laws may well claim our attention at this point. As far as these earliest laws are concerned, it is to be remembered that the members of the Bogus Legislature overreached themselves in the matter of their law-making, especially on the delicate subject of slavery. The law on this subject, in 1855, is certainly a most conspicuous record of human greed, malevolence and tyranny. It provided that any person advising insurrection among the negroes or assisting in the circulation of any paper for the purpose of exciting revolt on the part of slaves or free negroes should be punished with death, and that any person maintaining it was wrong to hold slaves in this territory should be imprisoned at least two years, and that any person conscientiously opposed to holding slaves should not sit as juror in a trial for the violation of any of the provisions of this act.*

A legislature capable of passing such a law as this was *not*

* *Statutes of Kansas*, 1855, ch. 151.

capable of compelling respect and obedience to this or any other of its acts in Kansas Territory, peopled as it then was, with northern men principally. So its revenue laws were inoperative and ineffectual, so far as free-state men were concerned.

Opposition soon became open and organized. For instance, we read in a contemporary newspaper of Lawrence, Kansas, an account of a public meeting held for the purpose of consulting over the assessment and payment of taxes said to be levied upon them by the Bogus Legislature.⁷ Among other things, it was unanimously resolved, "that we recommend to our oppressors that if they are out of money and must have a little to replenish their stock of—whiskey, that they levy their Tax upon their constituents of Missouri, and let honest men support a government of their own choice.

"On motion Resolved, that the papers of Lawrence be requested to publish the proceedings of this meeting."

Thus we see the spirit and temper of the people, when it came to a question of lending financial support to the alien legislature. But fortunately this body continued in power but two years.

Territorial auditors very naturally complained that counties were slow in responding to the officials of the Territory. The only source of revenue, to speak of, was the poll tax. In the years 1856, 1857, and 1858 delinquent taxes swelled to \$27,298. The legislature of 1858, succeeding the Bogus Legislature, fixing the rate of the territorial tax, provided that no part of the new tax should be appropriated towards paying the old debts of the Territory. The auditor recommended the collection of the old taxes, however, that they might be applied on new debts. When the 1860 legislature convened in January of that year, only 11 out of 30 counties had reported their 1859 assessment, hence the auditor was unable to report the taxable property of the Territory to the legislature. He says, after speaking of this fact: "Neither can I report to you anything like a correct estimate of the probable expenses of the territorial government for the ensuing year, as you are well aware this will much de-

⁷ *Herald of Freedom*, June 20, 1857.

pend upon your legislation, and therefore cannot be foreseen or estimated by the auditor.''⁸

The free-state men never paid a cent of the tax levied by the Bogus Legislature.⁹ It remained charged against the respective counties, constantly accumulating by interest, until 1867, when the State Legislature canceled it. The counties were very slow about paying their regularly levied taxes, and used the expedient of returning a delinquent list from year to year with their territorial taxes, thus throwing their deficits onto the territorial treasury.

We see from the foregoing that the sources of territorial revenue were extremely precarious. The operations of the territorial government, however, were merely of a temporary and tentative character, otherwise they would have been seriously crippled. Constitution making was the chief activity and admission into the Union was the one goal. The question of permanent improvements was postponed till after the acquisition of statehood. Even the \$25,000 appropriated by Congress for the erection of a capitol was squandered, leaving nothing to show for it but a stone foundation in the little country village of Lecompton.

An examination of the territorial budget shows that the four chief objects of expenditure in the order of their importance were: (1) Investigation of election frauds; (2) Holding constitutional conventions; (3) Territorial roads; (4) Legislative expenses. Revenue was far too small to meet the warrants drawn on the treasury. By the auditor's reports, we see the situation was as follows:

YEAR	REVENUE	WARRANTS
1855		\$398 00
1856	\$1,811 88	3,170 60
1857	3,383 09	13,287 55
1858	681 12	4,502 93
1859	25,544 06	62,409 26
1860	3,197 53	41,234 14
1861		10,467 88
	\$34,617 68	\$135,470 16

⁸ *Council Journal, K. T.*, 1860, p. 14.

⁹ Holloway, *Hist. of Kansas*, p. 437.

These warrants were all issued under "acts making appropriations," and hence have nothing to do with the "claims" which constituted an enormous debt in themselves, as explained below. The floating debt created by these warrants proved very harassing to the Territory. An unsuccessful attempt was made to unload it on Congress, but Congress at this time had more serious matters on hand. After a few years' delay the State government accepted it and issued bonds enough to fund it.

The matter of the claims alluded to above forms an interesting chapter in the Territory's history. They were the natural heritage of the border troubles, now so familiar to every student of those stirring times. In the early years of the Territory a great many claims were presented to the legislature for indemnity for moneys spent in maintaining the laws of the Territory, suppressing rebellion, furnishing military supplies, and for loss of property by depredations.¹⁰ Provision was made for fully and correctly ascertaining these losses. So complete was the investigation, and so fully did it reveal the fearful character of the troubles endured by the settlers during two of their stormiest years, that the whole mass of testimony was published by order of Congress, making two large volumes, of 892 pages each.

The territorial statute of 1859, covering these claims was ambiguous, implying that they were to be paid by Congress, but stating that the auditor was to issue his warrant on the treasurer for each claim allowed by the Claims Commission.¹¹ The auditor accordingly drew warrants for \$380,774.13. The treasurer issued territorial bonds on the face of these warrants to the amount of \$95,700, the law limiting the funded debt to \$100,000. The last territorial legislature took up the matter, and enthusiastically voted to repudiate the whole debt, both warrants and bonds. And almost in the next breath, both Houses, in a concurrent resolution, voted to memorialize Congress for a grant on these same claims, either of 500,000 acres of land, or \$500,000 in money. To settle the fate of these claims, so far as their payment by Kansas was concerned, the incoming State legislature promptly made their repudition definite and abso-

¹⁰ *House Journal*, K. T., 1861, p. 273-312.

¹¹ *House Journal*, K. T., 1861, p. 314-347, 482. *Council Journal*, p. 304.

lute.¹² Congress ignored the subject entirely, and so the holders of the claims were doomed to complete disappointment.

The history of the four constitutions before the people of the Territory is worthy of note, constituting as they did the one great issue of territorial politics. Their history may be summarized as follows:

(1) The Topeka Constitution, adopted December 15, 1855, by the inhabitants of the Territory. The pro-slavery men did not vote, and Congress rejected this constitution.

(2) Lecompton Constitution, rejected (second time) January 4, 1858, on a full vote.

(3) The Leavenworth Constitution died before the legislature, 1858.

(4) Wyandotte Constitution, adopted July 29, 1859, and accepted by Congress. Kansas admitted to the Union under this constitution, January 29, 1861.

The State paid the heavy expenses connected with the conventions framing the unsuccessful Lecompton and Leavenworth constitutions, and the successful Wyandotte constitution, but the Topeka convention was looked upon as an extra-legal affair. Its story is a very brief one. The Bogus Legislature had been ignored by the free-state men, who determined to forestall further usurpations by adopting a constitution and securing its acceptance by Congress. Accordingly a delegate convention was held at Topeka in the latter part of 1855, in which an executive committee was appointed with certain powers of a provisional government, looking forward to the formation of a State constitution and government. According to the report of the investigating committee chosen later on, this executive committee conducted its business in a prudent, judicious, economical, and masterly manner.¹³ With that miscalculating optimism which marked so much of the subsequent political career of their successors, these men issued scrip to meet their expenses. They received it themselves as pay for their services, as did likewise the members of the Topeka Constitutional Convention which met soon afterwards. The people also received the scrip at its full

¹² *Laws of Kansas*, 1861, ch. 5.

¹³ Prouty, *Topeka Constitutional Scrip*. Pamphlet, Topeka, 1887.

valuation. Thousands of dollars of it were cashed at par by friends of Kansas—the East. The Topeka constitution was adopted by a large majority of the popular vote, but the pro-slavery element took no part in the election. The free-state men thought their cause was won. A governor and legislature were soon chosen, and three short sessions of the legislature held under the Topeka constitution. But federal troops dispersed the assembly, the governor was arrested on a charge of treason, and Congress, after long deliberation, rejected this constitution. And thus this honest effort at “squatter sovereignty” was effectually stifled. Some \$25,000 in scrip had been issued by the Executive Committee and the Topeka government together, and an act thoughtfully passed providing that the State should redeem this scrip. But statehood failed to come just when expected. The holders of the scrip waited until admission as a State, and long years afterwards, for some action to be taken in the matter, resting satisfied as to the justice of their claims. An unsuccessful effort was made in 1883 to secure redemption by the State, and again four years later, but with no better results. Holders of the scrip had become too few and feeble. In the early days of statehood, the State had been too poor to pay these claims; when it became rich enough, it had no desire to pay them.

Railroads.—The railroads of Kansas have played too important a rôle in her development and financial history to be neglected in a discussion of this kind. For the question of granting subsidies to these roads has continued a live issue up to the present time.

At the very first session of the territorial legislature, in 1855, there were incorporated five railroad companies, a large number certainly for 8,000 people. The zeal of the incorporators, however, was not so much for constructing roads as for securing valuable territorial franchises, as was evidenced by their subsequent conduct. In the cases of some of these roads, the Leavenworth, Pawnee and Western, for example, county courts were authorized to subscribe for stock and issue county bonds in payment thereof.¹⁴ The sentiment of the people was voiced by the

¹⁴ *Statutes of K. T.* 1855, ch. 86, sec. 15.

Leavenworth Journal of this time, speaking of a prospective road. "If the road is to be built at all," says the *Journal*, "the brunt must be borne by Leavenworth. Unless our reported wealth is fictitious there can be no doubt as to our ability to do all that will be required of us to secure this road."¹⁵

But no railroad was built till after the territorial period. All grants of franchises, etc., of course, held over under the State laws.

Banking.—Territorial banking remained also undeveloped, although the legislature of 1857 incorporated a giant bank with an authorized capital of \$800,000, subscriptions to be paid in gold and silver. Authority was also granted to establish five branch banks, each with a capital of \$300,000, and with the same powers as the main bank. Each was to issue paper to the limit of \$3 in paper for every \$1 of specie on hand. This system of course was far in excess of the actual need of the territory, and was never carried out as planned.¹⁶

¹⁵ *Leavenworth Journal*, Aug. 26, 1858.

¹⁶ *Laws of Kans. Terr. 1857*, Second Session, p. 103.

CHAPTER III

CONSTITUTIONAL PROVISIONS

Kansas was admitted into the Union January 29, 1861, under the so-called Wyandotte constitution. A study of the genesis of this constitution shows that its framers based the financial provisions in it on the Ohio constitution of 1851, and to a less extent, on the Wisconsin constitution of 1848. The section concerning lotteries in the Ohio constitution is borrowed in the Kansas document.

To this constitution, as it went before Congress, was prefixed an "Ordinance" and subjoined a set of "Resolutions." The constitution was sandwiched between these two statements for forcing them, apparently, on the attention of Congress, and giving them more weight before that body. In the Ordinance, which is an interesting set of statements, Kansas promised forever to forego the right to tax the government lands in the state if the Government would, in turn, meet the following modest conditions:

(1) Grant to the State for her common schools, (a) sections 16 and 36 in each township (of 36 sections); (b) 500,000 acres of land as per act of Congress September 4, 1841; (c) and 5 per cent. of the proceeds of public lands of the State.

(2) Grant to the State, as University lands, 72 sections.

(3) Grant to the State for public buildings, 36 sections.

(4) Grant to the State for benevolent institutions, 72 sections.

(5) Grant to the State for works of public improvement 12 salt springs with 72 sections of land.

These propositions were laid down as conditions for the general government to accept, although it certainly did not fall

within the province of the young candidate for statehood to impose any conditions whatever upon Congress.

After the concluding section of the constitution some more wants were made known, but not in the lofty tone of conditions as stated in the Ordinance preceding. This time they were humbly stated as requests under the caption of "Resolutions." Under these Resolutions Congress was *requested*:

(1) To grant to the State 4,500,000 acres of land to aid in the construction of railroads and other internal improvements.

(2) To appropriate 50,000 acres of land for the improvement of the Kansas river from its mouth to Fort Riley. (This is an interesting request, seeing that Fort Riley is 140 miles from the mouth of the river, and for years there has been a dam across this stream at Lawrence, 40 miles from its mouth.)

(3) To grant all swamp lands to the State for the benefit of the common schools.

(4) To appropriate \$500,000, or in lieu thereof, 500,000 acres of land, for the payment of territorial claims (Acts of 1859).

(5) To assume the territorial debt.

As was to be expected, Congress coolly ignored both the Ordinance and Resolutions, and in turn, offered certain propositions to the people of Kansas.¹ These propositions, however, covered in part the points adduced in the Ordinance, and were all accepted by the Kansas legislature.² These grants, while not so munificent as those received by some neighboring States, were of considerable importance to the welfare of Kansas. They were:

(1) For common schools, sections 16 and 36 in each township.

(2) For a State University, 72 sections.

(3) For public buildings, 10 sections.

(4) Twelve Salt Springs, for use as the Legislature might see fit.

(5) Five per cent. of the sales of public lands, for making

¹ Congress, Act of Admission. See *Genl. Stat. Kans. 1901*. p. 1, ff., for Organic Act, Kansas Constitution, Ordinance, Resolutions, etc., etc.

² Joint Resolution. *Laws of Kans. 1862*. Jan. 20.

public roads and internal improvements, or for other purposes, as the Legislature might direct.

These gifts were all applied as foundations for the educational work of the State, except the small grant for public buildings, which was used to aid in the erection of the capitol. And, it should be added, the 500,000 acres, under the Congressional grant of 1841, was also placed—for a while—to the credit of the schools.

The foregoing provisions of Congress were merely incidental to the State constitution. To the constitution itself we must look for all those definite, rigid provisions which govern subsequent legislation on financial subjects. These provisions stand as an almost impassable barrier today in the way of any change, whether good or bad. The financial sections of the constitution may be classified under these headings: (1) revenue; (2) debt; (3) treasury; (4) school funds; (5) internal improvement; (6) lottery; (7) banking; and (8) miscellany.

(1) *Revenue*.—Bills for raising revenue may originate in either house, but may be amended or rejected by the other.³ "Finance and Taxation" are treated together as one subject, for the State income contemplated by the constitution is primarily a direct, general property tax. Uniformity is the key note in the rule of taxation and exemption which states, "The legislature shall provide for a uniform and equal rate of assessment and taxation; but all property used exclusively for State, county, municipal, literary, educational, scientific, religious, benevolent and charitable purposes, and personal property to the amount of at least \$200 for each family, shall be exempted from taxation."⁴ A *uniform* and an *equal* rate of assessment meant one and the same thing when this provision was inserted in the constitution, but subsequent changes in the character of taxable property made a *uniform* assessment an *unequal* one, as will be shown in a later chapter. It proved a case of equal treatment of unequals. Banks were the only corporations thought worthy of especial mention under the tax provisions of the constitution. These were treated as follows.⁵ "The legis-

³ *Constitution of Kansas*. Art. 2, Sec. 12.

⁴ Art. 11, Sec. 1.

⁵ Art. 11, Sec. 2.

lature shall provide for taxing the notes and bills discounted or purchased, moneys loaned, and other property, effects or dues of every description (without deduction) of all banks now existing, or hereafter to be created, and of all bankers; so that all property employed in banking shall always bear a burden of taxation equal to that imposed upon the property of individuals." We see in this provision some lingering apprehensions of unknown dangers of a great moneyed monopoly dating back to those historical experiences of our own and other countries with money-issuing institutions.

The rule governing the time for which appropriations shall be made is similar to that in the Federal constitution. "The legislature shall provide at each regular session, for raising revenue sufficient to defray the current expenses of the State for two years. No tax shall be levied except in pursuance of a law, which shall distinctly state the object of the same, to which object only such tax shall be applied. * * * No appropriation shall be for a longer term than two years."⁵

(2) *Debt*.—Bankruptcy and debt repudiation in the eastern States had given sufficient warning to the framers of the Kansas constitution. Accordingly we find certain limits laid down for the State debt. For the purpose of defraying extraordinary expenses and making public improvements, the State may contract a debt of \$1,000,000. Adequate provision must be made at the time the debt is contracted for the payment of interest and principal when due. No debt of over \$1,000,000 may be contracted without first submitting the question to a popular vote at a general election and securing a majority in its favor.

It is further provided in another section,⁶ that the State may borrow money to repel invasion, suppress insurrection, or defend the State in time of war, but the money thus raised shall be applied exclusively to the object for which the loan was authorized, or to the repayment of the debt thereby created. So, as a matter of fact, the State may in time of war contract a debt beyond the million-dollar limit without submitting it to a popular vote.

⁵ Art. 11, Sec. 3, 4; Art. 2, Sec. 24.

⁶ Art. 11, Sec. 5, 6, 7.

(3) *Treasury*.—Only two provisions pertain to the treasury administration. No money shall be drawn from the treasury except in pursuance of a specific appropriation, and an accurate, detailed statement of all receipts and expenditures of the public moneys shall be published as prescribed by law.⁷

(4) *School Funds*.—Considerable attention is paid in the constitution to these funds, provisions being made both for funds of the University and of the common schools. Their sources as well as their management are covered by general regulations. Regarding the sources, the constitution says, "the proceeds of all lands that have been, or may be granted by the United States to the State, for the support of schools, and the 500,000 acres of land granted to the new States, under an act of Congress distributing the proceeds of public lands among the several States of the union, approved September 4, 1841, and all estates of persons dying without heir or will, and such per cent. as may be granted by Congress of the sale of lands in the State, shall be the common property of the State, and shall be a perpetual school fund, which shall not be diminished, but the interest of which, together with all rents of the lands, and such other means as the legislature may provide by tax or otherwise, shall be inviolably appropriated to the support of common schools."⁸ Provision is also made for augmenting the annual common school funds of the municipalities by this inclusive section:⁹ "All money which shall be paid by persons as an equivalent for exemption from military duty, the clear proceeds of estrays, ownership of which shall vest in the taker-up; and the proceeds of fines for any breach of the penal law, shall be exclusively applied, in the several counties in which the money is paid or fines collected, to the support of the common schools."

All funds arising from the sale of university lands, and all other grants or bequests, either by the State or by individuals, for the university, shall remain a perpetual fund, to be called the university fund, and the interest of which shall be appropriated to the support of the State University.¹⁰

⁷ Art. 2, Sec. 24; Art. 13, Sec. 5.

⁸ Art. 6, Sec. 3.

⁹ Art. 6, Sec. 6.

¹⁰ Art. 6, Sec. 7.

For the management and investment of the school funds of the State, a board of commissioners is created, consisting of the state superintendent of public instruction, the secretary of state, and the attorney general.¹¹ The income of these funds is to be disbursed annually to the several school districts according to the number of children of school age (5 to 21 years), and where school is held at least three months in the year.¹²

The framers of the constitution weighed the proposition of making the school lands a part of the permanent patrimony of the State. The following flexible proposition was, however, adopted: "The school lands shall not be sold unless such sale shall be authorized by a vote of the people at a general election; but, subject to a revaluation every five years, they may be leased for any number of years, not exceeding 25, at a rate established by law."¹³

Concerning ecclesiastical management of public school moneys, it is provided that "no religious sect or sects shall ever control any part of the common school or university funds of the State."¹⁴

(5) *Internal Improvement*.—The statement on this subject is brief and concise.¹⁵ The "State shall never be a party in carrying on any works of internal improvement."

(6) *Lotteries*.—"Lotteries and the sale of lottery tickets are forever prohibited."¹⁶ Thus this revenue scheme was peremptorily thrust aside, the social considerations involved being held paramount to its possible fiscal advantages.

(7) *Banking*.—Many constitutional provisions on the subject of banking clearly pertain only to banks of issue, and hence were rendered obsolete by the United States National Bank acts of 1863 and 1864. These are therefore omitted here. Other sections are not so clear, as, for instance, the following:¹⁷ "No bank shall be established otherwise than under a general banking law. The State shall not be a stockholder in any banking institution. No banking law shall be in force until the same shall have been submitted to a vote of the electors of the State at some

¹¹ Art. 6, Sec. 9.

¹² Art. 6, Sec. 4.

¹³ Art. 6, Sec. 5.

¹⁴ Art. 6, Sec. 8.

¹⁵ Art. 11, Sec. 8.

¹⁶ Art. 15, Sec. 3.

¹⁷ Art. 13, Sec. 1, 5, 8.

general election, and approved by a majority of all the votes cast."

The courts settled the question of the interpretation of these sections a few years after the adoption of the constitution. It was held that this entire article on banking applied only to banks of issues, and did not prohibit the legislature from creating banks of deposit and discount.¹⁸

(8) *Miscellany*.—The only limitations concerning municipal taxation are found in this elastic section: "Provision shall be made by general law for the organization of cities, towns, and villages; and their powers of taxation, assessment, borrowing money, contracting debts, and loaning their credit, shall be so restricted as to prevent the abuse of such power."¹⁹ Thus we see the municipalities have no specific constitutional limits set to their indebtedness, whereas the State is limited to \$1,000,000, practically.

Public printing, one of the most important items in the State budget, is regulated by a clause in the constitution, declaring it shall be done at the capital by a State printer elected by the legislature in joint session.²⁰ This remains, therefore, one of the choicest bits of patronage at the disposal of the State legislature.

Under the miscellaneous provisions of the constitution, we find one section vesting the legislature with anomalous judicial and administrative powers over the salaries of certain officers. "The legislature," says this section, "may reduce the salaries of officers who shall neglect the performance of any legal duty."²¹

The foregoing are all of the provisions of the constitution pertaining specifically or generally to financial matters. Legislation has for the most part conformed to these regulations, but not always. The most violent departures have come before the courts for correction, but many minor irregularities have never been subjected to judicial scrutiny.

It now remains to trace the development of Kansas finances under this constitution, and this will be done in the following pages.

¹⁸ 20 *Kans.*, 440.

¹⁹ Art. 12, Sec. 5.

²⁰ Art. 15, Sec. 4.

²¹ Art. 15, Sec. 7.

CHAPTER IV

NINE YEARS OF CREDIT FINANCIERING, 1861-1869

While Secretary Chase was grappling with the problems of federal finances just before the impending crisis of the great Civil War, the young commonwealth of Kansas was beginning to face serious financial questions of her own. Hardships were doubly great, because it was a period of beginnings as well as a period of war. The late territory had bequeathed nothing to the young State, except a heritage of debt. There was no building for the State legislature to meet in; no charitable institutions for defective and dependent; no penitentiary for the violators of the law. All these were to be provided at once. Aid was pressingly needed by the general government in raising troops and making other military preparations, and in this extremity a direct tax of over \$70,000 had been imposed upon the State. And, to make matters worse, the outgoing territorial government had "signalized its dissolution by stamping upon its credit the ineffaceable stigma of repudiation, thus leaving the new State without funds for the payment of current expenses, and also excluded from those money markets which are the ordinary resources [*sic*] of needy governments."¹

Tax Laws.—The tax laws of this period continued that process of alteration and mending which was begun early in territorial days. Change followed change too rapidly for any measure to be thoroughly tested, or for officers to adapt themselves to the new conditions. The second governor claimed that on the subject of taxation he had neither statistics nor facts.²

¹ First Auditor's Report, 1861. *Kans. Doc.*, 1861.

² Inaugural Message of Gov. Carney, 1863.

We will examine briefly the nature of the tax laws of this period before proceeding with the discussion of the State income.

The subject of exemptions was one that underwent the fewest changes at this time. Legislators were satisfied to leave the amount exempt from taxation at \$200 of personalty for each family and those other classes of property of a public nature specifically mentioned in the constitution. The true value in money was designated as the legal rule for valuing all property. Merchants and manufacturers were to be taxed on the average value of their stock on hand during the preceding year. Banks and bankers were to be taxed once at the bank for all the stock of the bank. "Railways and other corporations" formed an independent category of property and were to make sworn returns of tangible property to the various county clerks, and on this self-assessment were to be taxed. Real estate according to the 1863 law, was to be assessed every three years. This was changed three years later to a yearly assessment. County and state boards of equalization were made a part of the system. Attempt was made to reach all personal property by having returns made as stated by the owner, supplemented with a double oath—that of the owner and that of the assessor. This, it was hoped, would prevent all forms of lying and collusion. A satisfactory rule for the levy of taxes was adopted which provided that the levy should be made by a board of county commissioners for the county, by the mayor and council for cities, and by a school board for school districts. Both land and personal property were to be sold for unpaid taxes, under certain conditions. The provisions for redemption of lands thus sold were subjects of much controversy. The time limit for redemption was left at three years, but the per cent. to be added to the sale-price, taxes, and other expenses was hard to settle satisfactorily. Too large a per cent. bore heavily on the debtor whose lands had been sold by the sheriff at a tax sale. And too low a per cent. caused carelessness and negligence on the delinquent's part, a very disastrous thing to the local revenues. Twenty-five per cent. was thought a proper penalty for several years, but results were disappointing.

Plenty of cheap land favored mobility of farmers. In 1869 this penalty was raised to 50 per cent.³

The amount of tinkering with the tax laws shows they were a misfit in many ways. The situation was well summed up by Governor Carney in his message of 1864, when he wrote, "I declare the simple truth when I say that the first tax system adopted by each western State, and by the cities in each western state, was bad—so bad that its very abuses compelled an entire reform. * * * Now, if we were to act in our representative capacity as individuals do who adapt themselves practically to new circumstances, we would, instead of remembering the ways and customs of our old homes, thrown by as cast-off clothes, examine the best ways of taxation, and adopt one equal to the best. This is the course I recommend to you as being alike practical and wise. Let all protected by the State share equally its burdens in proportion to their property."

Income.—Having taken this brief survey of the tax laws of this period, we are now in a position to consider the State income, depending as it did on the successful working of these laws. The needs of the State, however, being unusually great, and the tax system being rather a tentative scheme than a successful system, it follows necessarily that the bulk of state revenues had to come from other sources than taxation, i. e., loans.

The State tax levy during this period was higher than was ever reached afterwards. But collections were slow. The legislature frequently extended the time one year for a county to collect its taxes. This was done in 1861 in the case of Leavenworth, Breckenridge, Lykins and other counties. Whenever counties made a mistake and returned erroneous or double-assessments, this was subtracted from their apportionment, or else charged against the State as a debt to the counties. This threw the loss on the State and off the county where it belonged. The amount of these taxes which the State was thus called on to refund to the counties was an important item and contributed not a little towards deranging the State's finances.

³ See *Session Laws*, 1869; also *Genl. Statutes*, 1868, ch. 107; *Session Laws*, 1866, ch. 118; 1863, ch. 60.

The treasurers' reports of this period exhibit the amount and high rates of the State levy, as is shown in the table below:

TOTAL ASSESSED VALUATION, LEVY, AND RATE OF STATE TAXES.

Year.	Valuation.	Levy.	Rate in mills.
1861.....	\$24,737,563	\$14,234	4
1862.....	19,235,749	115,737	5
1863.....	25,480,499	152,763	7
1864.....	30,502,791	182,585	7
1865.....	36,120,945	216,757	7
1866.....	50,439,645	252,201	6
1867.....	56,276,380	231,382	6
1868.....	66,949,950	435,406	6½
1869.....	76,333,697	763,637	10

In addition to the first year's levy of four mills, a poll tax of fifty cents was levied upon every white male between the ages of 21 and 50 years.

This income from taxation was inadequate to meet current expenses, not to speak of the extraordinary expenses of public buildings, and the military expenses in connection with the war. Hence recourse had to be had to the sale of bonds, and on such terms as the State's credit could command. Since part of these bonds were for military purposes—"to repel invasion, suppress insurrection and defend the State" in the language of the Act, the million-dollar limit was not observed. Several different bond issues were made, for the various purposes before mentioned, aggregating \$1,373,275, and bearing interest at rates from 6 to 10 per cent. A few were sold in the local home market in small blocks at par, but far the greater portion were disposed of in New York in large amounts and at heavy discounts.

Later bond issues sink into insignificance when compared with this period of nine years. During the next thirty years, the entire amount of bonds issued on new debts was almost exactly one twenty-eighth of the issue of these nine years. For, up to the year 1900, omitting the refunding of these early bonds, only \$49,000 of bonds were issued. Hence it is that this period stands out so strikingly as one of credit financiering.

The particulars of sale, rates of interest, etc., of these bonds will be readily seen by a glance at the following table:

BOND STATEMENT, 1861-1869.

Issued under act of	Date of issue.	For what.	Int. Rate per cent.	When pay- able.	Where.	Face of bonds.	Amount sold for.	Rate sold for.
1861	July 1, 1861	Current expenses	7	1876	N. Y.	\$150,000	} \$173,150 00	84.9
1863	Feb. 20, 1863	Current expenses	7	1878	N. Y.	54,000		
1863	July 1, 1863	Fund Ter. Debt.	6	1883	Topeka	61,600	61,600 00	100.
1864	July 1, 1864	Refund Taxes...	6	1884	Topeka	39,675	39,675 00	100.
1864	July 1, 1864	Military.....	7	1884	N. Y.	100,000	87,586 00	87.6
1864	July 1, 1864	Penitentiary.....	7	1884	N. Y.	50,000	45,000 00	90.0
1866	July 1, 1866	Penitentiary.....	7	1886	N. Y.	60,000	54,000 00	91.0
1866	July 1, 1866	Pub. improv'm'ts	7	1896	N. Y.	70,000	63,100 00	90.4
1866	July 1, 1866	Military.....	7	1886	Topeka	40,000	38,320 00	95.5
1867	July 1, 1867	Penitentiary.....	7	1897	N. Y.	100,000	89,329 16	89.3
1867	July 1, 1867	Capitol.....	7	1897	N. Y.	100,000	89,513 00	89.5
1867	July 1, 1867	Deaf & D. Asyl..	7	1887	Topeka	15,500	15,000 00	100.
1868	July 1, 1868	Capitol.....	7	1896	N. Y.	150,000	137,180 00	91.4
1868	July 1, 1868	Penitentiary.....	7	1896	N. Y.	50,000	45,588 35	91.1
1868	July 1, 1868	Military.....	7	1888	N. Y.	30,000	27,353 00	91.1
1868	July 1, 1868	Insane Asyl.....	7	1896	N. Y.	20,000	18,352 33	91.7
1869	Jan. 1, 1869	Military.....	7	1889	N. Y.	75,000	69,000 00	92.0
1869	Jan. 1, 1869	Military.....	7	1899	N. Y.	89,000	83,200 00	93.5
1869	Jan. 1, 1869	Military.....	7	1889	N. Y.	12,000	11,380 00	94.8
1869	Jan. 1, 1869	Capitol.....	7	1889	N. Y.	70,000	66,442 57	94.9
1861	July 1, 1862	Military.....	10	1863	.....	31,000	12,400 00	40.
1866	April 1, 1866	Ag. College.....	10	1871	.....	5,500	5,500 00	100.
Totals.....						\$1,373,275	\$1,233,679 41	89.

Average amount sold for, 89 per cent.

The first bond issue, that of \$150,000, was an unfortunate one in many respects. It was for current expenses which should have been met by taxation. The negotiation of these bonds involved some irregularities which led to the impeachment of the governor, auditor and secretary of state. The law contemplated the sale of these bonds at 70 cents on the dollar and authorized the three men named above to carry out the details of the sale. An agent was employed under contract to sell the bonds and return to the State 60 per cent. of their face value, any surplus thereover to go to the agent as a commission. This was thought a fair price by many, while others considered 50 per cent. a good price for Kansas bonds.* The bond agent, however, found a good market in New York and sold a large part of the bonds at 85 per cent., but only 60 per cent. was turned into the State treasury. The cry of fraud was raised. An impeachment of the governor, auditor and secretary of the

*The minority report of the House Investigating Committee, 1862, thought 50 per cent. more than the market value of Kansas bonds. *House Journal*, 1862, p. 333.

state followed, in which the auditor and secretary were convicted and removed from office, but the governor, Charles Robinson, was enthusiastically acquitted.

The territorial debt was funded by issuing bonds of \$100 each, putting a few on the market each year as territorial warrants came in.

Errors on the part of counties remitting their share of State taxes were successfully shifted to the public treasury, and this increased the bonded debt by about \$40,000, when it came to refunding these taxes.

Of the bonds issued in 1867, the penitentiary and the capital bonds were the principal ones, being 30-year, 7 per cent. bonds, with a total face value of \$200,000. The State realized \$178,842 in cash from their sale. That is, the loss in discount to the State was \$21,158. The interest paid on these was, in all, \$420,000, or over twice their face value. Adding this to the discount, we have the State, for the immediate use of \$200,000, paying in the end, \$441,158.

But a heavier burden was thrown on the State in her short-term loans. For instance, \$31,000 of military bonds were negotiated and sold at 40 per cent., the bonds bearing 10 per cent. interest and running two years. They were issued at the critical period, when the war was unsettling the finances of both State and Nation. The State received \$12,400, and returned \$37,200 or 300 per cent. as principal and interest. This was a heavy penalty for poor credit.

High interest rates and heavy discounts combined to make the State's financial burdens especially heavy during this period of beginnings. As we find the highest State tax levy in 1869 (10 mills), so also do we find the per capita debt at its maximum at this identical time. Population and debt gradually increased during this period, causing fluctuations as follows:

STATE DEBT PER CAPITA, 1861-69

1861	\$1.30
1862	1.27
1863	2.14
1864	3.50

1865	3.35
1866	3.32
1867	3.44
1868	3.65
1869	3.95

Expenditure.—The expenditures of the State its first year were limited to its narrowest and most necessary functions, namely, to items of administration, the judiciary, education, legislation, and police, including defense and penal institutions. The penal expenses were those incurred in keeping State prisoners in county jails, pending the erection of a State Penitentiary. In the succeeding years, prior to 1870, new expenditure accounts were added to the budget in the following order: 1862, a State Library and Public Charities first come in for a share of the public funds; 1864, an Immigration Board is created, looking to the development of the State's material resources; 1867, an Agricultural Society is formed to further agriculture in the State; 1869, a Horticultural Society is created, and relief is granted to frontier settlers.

As compared with later years, the outlay for the year 1861 was extremely small and insignificant. The treasurer did not even publish a statement of the transactions of his office, and not till 1885, after a careful investigation of all the records was such a report issued. By this we find that warrants were issued to the amount of \$62,613.33.

The principal items of the debt, as we saw by the bond issues above were public buildings, \$615,500, and military expenses, \$377,000.

For educational purposes there was a bond issue of \$5,500 to help establish a State Agricultural College. But this does not indicate that the state outlay for education was low, but only that this outlay was made in some other way than through the aid of bond issue. For example, the very first legislature made an annual assessment and levy of a one-mill tax on the property of the State for the support of the common schools.⁵ This was, in effect, an appropriation for a longer term than

⁵ *Laws of 1861*, ch. 76, Sec. 5.

the constitution contemplated, but it went unchallenged for several years. The law was re-enacted in the General Statutes of 1868, and again in 1876, but was repealed in 1879.⁶ The repeal was on constitutional grounds and was therefore sustained by the Supreme Court of the State.

In the matter of public buildings the State Agricultural College and the State University were the first to claim the State's attention, and in a manner explained below. A penal institution came in next for the State's attention, and the cost of this was distributed over a long period of years by a bond issue. The same policy was applied to the later buildings, the capitol being next in order. Pending the erection of this structure the legislature occupied rented quarters in the capital city. Outlay for public charity work was begun with the erection of the Deaf and Dumb Asylum at Olathe, followed with the Insane Asylum at Topeka.

Fiscal Administration.—The public school lands granted by the federal government constituted a magnificent domain. The State chose the policy of selling these lands rather than renting them on long-term leases. By this plan, it was thought, permanent improvements would be encouraged, and a more general development of the State's resources would follow.

A piece of costly folly was committed with the 500,000-acre domain, granted by Congress under the Act of 1841. This had been set aside by the Kansas Constitution as part of the common school permanent fund, but was perverted to another use by the legislature of 1866. After long wrangling in both Houses, it was voted to sell these lands and appropriate the proceeds to four railroad companies. Members of the minority opposed the bill as unconstitutional and put through by local personal interests.⁷ The proceeds of this sale gave rise to a small railroad fund which was carried on the treasurer's books for many years. The amount due each road was so small that it was never called for by some of the roads, and was later put into the general revenue fund. Thus the proceeds of the

⁶ *Genl. Stat.* 1868, ch. 92, Sec. 76.

⁷ *Senate Journal*, Jan. 26, 1866. *House Journal*, Feb. 17, 1866.

500,000 acres were completely dissipated, the State realizing a minimum of gain at a maximum of cost.

Foundations for higher education were provided in the Act of Admission, and hence there was no period in her statehood when Kansas did not make this subject a matter of attention. Denominational colleges had already made beginnings, both at Manhattan, later the seat of the Agricultural College, and at Lawrence, destined to be the seat of the State University. The State acquired both of these small plants.

For a State University, there was a federal land grant of 46,080 acres. The citizens of Lawrence gave the State a bonus of \$15,000 to secure the location of the University there. This was adequate to finance the young institution a few years, so far as buildings and apparatus were concerned, till its needs had expanded.

The State Normal School was founded at Emporia by the national grant of salt lands, aggregating 30,380 acres.

The Morrill Act of Congress, 1862, provided for the State Agricultural College. This Act gave Kansas 90,000 acres as a foundation for her agricultural school, an endowment much more valuable than that for her University or Normal School.

Management of state funds during this period shows some interesting developments. The administration of the school funds was placed by the constitution in the care of a commission of three men—the state superintendent of public instruction, the secretary of state, and the attorney general. By a law of 1861, they were empowered to lend these funds to the State of Kansas, or to citizens of Kansas, on real estate mortgage security. The custom became established, however, of investing these funds in the bonds of the State and the local divisions.

Up to the year 1868, not one cent had been levied and set apart for a sinking fund. Previous to 1867, the general revenue and interest funds were kept together under the heading of "revenue," and receipted for as "State tax." In the year 1867, these funds were separated, after a fashion, and entered under the two headings, revenue and sinking fund. But the accruing interest on the bonds amounted to so much that there was nothing left for a sinking fund. During the fiscal year of

1869, for the first time, the interest fund and the sinking fund were kept separate, and so remained. The sinking fund this year amounted to \$29,715. Of this amount, \$26,000 was borrowed by a joint resolution, and applied to the payment of State warrants. The idea of an inviolable sinking fund developed very slowly. This was partly due to the fact that interest on bonds regularly fell due January 1st, and State taxes not till January 10th, and hence it was necessary to make temporary loans on interest to meet this accrued bond interest, or else borrow from the available moneys in the sinking fund or some other fund. This led to the practice of transferring from one fund to another as emergencies arose. The number of funds greatly increased from year to year till their unwieldiness compelled a reform.

Appropriations during this period were quite regularly in excess of income. Many auditor's warrants were presented to the treasurer and stamped "unpaid for want of funds." The large amount of State scrip thus made during several successive years without making adequate provision for its payment, depreciated so much upon the market as to occasion serious loss to the State, and to create general complaint and dissatisfaction among the people.^a These warrants bore interest at the rate of 7 per cent. from date of presentation till final payment. How general this practice was of stamping warrants unpaid, we know by the amount of interest paid yearly by the State on them. This is shown in the accompanying table:

INTEREST PAID ON STATE WARRANTS, 1861-69^b

1861	\$2,335 00
1862	9,031 84
1863	4,673 87
1864	4,219 95
1865	3,204 67
1866	2,331 19
1867	2,115 20

^a *Treasurer's Report*, 1870.

^b *Auditor's Report*, 1873.

1868	4,676 80
1869	9,098 79
Total	\$41,687 31

Besides this scrip, there was another kind of floating debt which might be called "auditor-made scrip." The laws of 1868 authorized the auditor to issue certificates of indebtedness to meet all proper bills, not covered by legislative appropriation. These acts of the auditor were ratified by the legislature, and some \$12,000 thus issued during the next two years.

There was much dissatisfaction at this time with the treasury machinery and its general management. An elaborate act was passed in 1866 whereby it was purposed to keep securely in special vaults and safes in the Treasury itself all the public money and to separate it entirely from commercial use. For the same thing was happening to treasurers here as had happened in other States, namely, they had embraced the opportunity of making private use of the public funds. If an extensive system of accounts, multiplied entries, numerous checks and guards, and frequent examinations of the treasury could have prevented this abuse of a public trust, this act would have succeeded. Under it each transaction was transcribed at least six times. As often as once a month and without previous notice or intimation it was made the duty of the governor, secretary and auditor, to make a thorough and complete examination of all vouchers, books and effects which belonged to the treasury, and to compare the same with the auditor's accounts, that there might be no deficiency. It was furthermore made a high crime, punishable by fine and imprisonment, to use, loan or deposit with banks or individuals any portion of the public moneys (except to pay interest on State bonds when it became due).

This act was never carried out. It was a practical impossibility to make the monthly examinations called for. Precedent had established the custom of using a Topeka bank for making collections and remittances, and this practice was continued. Neither were the public funds well safe-guarded, as later investigation showed.

A few more strictures were created by an act the succeeding year, the title of which explained its purpose to be "to restrain state and county officials from speculating in their office." Treasurers evidently did not believe in letting the public funds lie idle, even if the law did require it.

Claims.—As an aftermath of the war, a vast amount of claims were brought forward against the State. These came chiefly from the two important border raids,—the Quantrell Raid in 1863, in which Lawrence was sacked and looted, and the Price Raid in 1864. Since these were not warfare in the ordinary sense of the word,—there being no opposing forces,—those on whom suffering and losses were entailed brought demands against the State for payment. After repeated examinations of these claims, the legislature in 1865 agreed to assume the Price Raid claims, looking to the general government for ultimate reimbursement. Action was taken by the government a few years later and these claims finally settled, as explained in a subsequent chapter.

The Quantrell Raid claims, however, dragged on for over thirty years. The legislature of 1901 made a satisfactory adjustment.

Railroads.—This was a period of beginnings in railroads and their development cannot be dissociated from the development of the State. Legislators' speeches and governors' messages referred to these roads in terms of unqualified optimism. "I call your special attention," says Governor Carney in 1863, "to the Pacific Railroad. No mightier work was ever undertaken by any government. It will put the Atlantic and Pacific in close neighborhood, and melt down, as it were, the Rocky Mountains, the only barrier the fathers feared could ever divide the Republic." Others thought that "these grand enterprises" would make Kansas the "great highway for the commerce of the world."¹⁰ Perhaps the climax of optimism was reached in Governor Harvey's message of 1870, where he says, concerning the new railroad bridge across the Missouri river at Leavenworth; "It is being made a structure consonant with

¹⁰ *Message of Gov. Crawford, 1868; Message of Gov. Harvey, 1869.*

the richness and beauty of its surroundings, and of utility equal to the demands which bid fair to make Kansas the highway of the continent, Leavenworth city the commercial emporium of the Missouri valley, and Fort Leavenworth the future capital of the United States."

It is very plain, that had the constitution not expressly forbidden it, the State would have been a party in many railroad enterprises. Governor Carney (1863) spoke of a "general State system of railroads." Governor Harvey (1869) used these words in speaking of recommended legislation: "You should encourage in every judicious and proper manner the rapid construction of all these roads."

These utterances revealed the true spirit of eagerness among the people to vote subsidies to these roads, an eagerness which could not be held in check, although the federal government was now granting these roads millions of acres of land. The State perverted from its original use the 500,000 acres of school land mentioned above, and dribbled its proceeds out from year to year among the railroads. But the constitutional check was sufficient to stop any further state activity in this direction. But a way was found around the constitutional barrier, since the people were determined to have the roads, and were satisfied that the best policy was one of direct aid. Hence came the law of 1865, authorizing counties to subscribe for stock in and issue bonds to railroad companies, to the extent of \$300,000 to each county. The law soon came before the courts for construction. Leavenworth county had promptly voted aid to the Union Pacific to the amount of \$250,000. The first bonds falling due in 1867, payment was refused. The courts upheld the validity of the bonds and construed the law as constitutional and binding.¹¹

One important phase of the question of taxation of railroads was settled in connection with the Union Pacific in Kansas.¹² Congress had, in 1862, granted to this road a munificent land subsidy. The company was to receive every alternate section of land (odd numbers)) for ten miles on each side of the track,

¹¹ *Leavenworth county vs. Miller*, 7 Kas., 479. *State vs. Nemaha county*, 7 Kas., 542.

¹² *Report Texas Tax Commission*, 1899, p. 54 seq.

where such lands had not been sold or otherwise disposed of.¹³ This amounted to about two and one-half million acres. Congress was importuned for more. Two years later an amendatory act was passed, authorizing the issue of first-mortgage bonds, and extending the above grant to twenty miles on each side of the road.¹⁴ This made the grant about five million acres. The first-mortgage bonds in favor of the United States were later changed to second-mortgage bonds. In 1855 the territorial legislature of Kansas had chartered the Leavenworth, Pawnee & Western Railroad Company, and in 1862 the State legislature changed its name to the Union Pacific Railroad Company, Eastern Division, and authorized it to consolidate with any other company or companies, organized or to be organized under the laws of the United States, or of any State or Territory. Congress afterwards chartered the Union Pacific company. But the Eastern Division remained a State road, although Congress had subsidized it so liberally. It was assessed for State taxation. An injunction was asked and obtained, restraining the collection of the tax, upon the ground that the United States held a mortgage against the road, and that it was bound to perform certain duties, and ultimately to pay 5 per cent. of its net earnings to the United States, on which grounds, notwithstanding it was a State corporation having federal aid, it claimed exemption from taxation. The question was brought before the United States Supreme Court, where a decision was given in favor of Kansas. Chief Justice Chase rendering the opinion of the Court, held:¹⁵

“No one questions that the power to tax all property, business and persons, within their respective limits, is original in the States, and has never been surrendered. It cannot be so used, indeed, as to defeat or hinder the operations of the national government, but it will be safe to conclude in general, in reference to persons and State corporations employed in government service, that when Congress has not interposed to protect their property from State taxation, such taxation is not obnoxious to

¹³ 12 *Statutes at Large*, 489.

¹⁴ 13 *Statutes at Large*, 356.

¹⁵ 76 *U. S.*, 579.

that objection. (*Lane county v. Oregon*. [ante 105]; *Bank v. Kentucky*. [ante 701]).

"We perceive no limits to the principle of exemptions which the complainants seek to establish. It would remove from the reach of State taxation all property of every agent of the government. Every corporation engaged in the transportation of mails or of government property of any description, by land or water, or in supplying materials for the use of the government, or in performing any service of whatever kind, might claim the benefit of the exemption. The amount of property now held by such corporations, and having relations more or less direct to the national government and its services, is very great. And this amount is continually increasing; so that it may admit of question whether the whole income of the property which will remain liable to State taxation, if the principle contended for is admitted and applied in its fullest extent, may not ultimately be found inadequate to the support of the State governments.

"The nature of the claims to exemption which would be set up is well illustrated in the case before us. The very ground of the claim is in the bounties of the general government. The allegation is, that the government has advanced large sums to aid in the construction of the road; has contented itself with the security of a second-mortgage; has made large grants of land upon no condition of benefit to itself, except that the company will perform certain services for full compensation, independently of those grants; and will admit the government to a very limited and wholly contingent interest in remote net income."

This settled the point that the State might tax a road having a federal charter. But the question was still open as to the taxation of federal land grants. The Amendatory Act of 1864¹³ provided that "before any land granted in this act shall be conveyed to the said company * * * there shall first be paid into the treasury of the United States the cost of surveying, selecting, and conveying the same by the said company or party in interest, as the titles shall be required by said company." This reserved an equity in the United States, which the Supreme Court decided

¹³ 13 *Statutes at Large*, 356, Sec. 21.

the State could not defeat or embarrass.¹⁷ In this way the railroads escaped taxation on all their congressional grants till such lands were actually patented. They were not patented, therefore much in advance of their sale, and in fact are not yet all patented. Taxes were also escaped in unorganized counties, and this also relieved the railroads of thousands of dollars of taxation annually for many years.

Banking.—Provision was made by the legislature of 1861 for the organization of banks of issue, with a minimum capital of \$25,000.¹⁸ This system, of course, did not have time to develop to any great extent before the National Banking system was introduced by the federal government, driving out of circulation the notes of State banks by the 10 per cent. tax. Specie payment was not successfully maintained for a single year by the State banks, for we find an act by the first legislature authorizing the suspension of specie payment.¹⁹

¹⁷ *Railway company v. Prescott*, 16 Wallace, 103. *Railway company v. MoShane*, 22 Wallace, 444.

¹⁸ *Laws of 1861*, ch. 4.

¹⁹ *Laws of 1861*, p. 279.

CHAPTER V

PROSPERITY AND REACTION, 1869-1879

A few general features of this period must be noted before taking up the discussion of its financial history in detail. When the readjustment was made after the Civil War, a brief era of prosperity dawned for Kansas. Plenty of money was being spent,—borrowed money to be sure, but the time for repayment was far in the future. In the early seventies crops were good, and prosperity in agriculture meant prosperity for the whole state. The various state buildings were in process of erection and were a source of great local pride. Speaking of the new State University building, just finished at a cost of \$138,500, the governor proudly said: "This structure is believed to be the best college building which has ever been erected in our country."¹ But the rejoicings of prosperity were soon turned into the wailings of calamity. The year 1874 was a memorable one in the annals of Kansas, being known as the Grasshopper year. It was at this time that the grasshoppers literally devastated the fields of the state. Destitution was so great that a special session of the legislature was called to devise means of relief. Authority was granted to counties to issue relief bonds, and the state issued bonds to purchase these. This was, of course, for the frontier regions, where the accumulated wealth was very meager indeed. The eastern part of the state was able to care for itself.

That peculiar social upheaval among the farmers, the Grange movement, gathered weight and strength with each fresh cause of discontent. The dramatic bribery case of United States Senator Pomeroy and a member of the legislature in 1873 was only

¹ *Message of Gov. Osborn, 1873.*

the beginning of a series of political peculations. The next year impeachment proceedings were instituted against the state treasurer, Josiah E. Hayes, for "high crimes and misdemeanors in office." His resignation put a stop to the proceedings. The year following, it developed that the school fund had been defrauded of a large amount through the connivance of Treasurer Lappin. He, too, resigned, but the matter was not dropped till loss to the State had been made good.

Tax Laws.—This was an interesting period in the state's history from the standpoint of her tax legislation and general fiscal affairs.

Dissatisfaction with the tax laws was becoming more general, and especially among the Grangers, who now began to give expression to their common feelings. They felt keenly the injustice of the prevailing assessment of personal property below its true value, or the entire escape of this property from taxation in many cases. They secured a law providing that assessors should meet and agree upon an "equal basis of valuation."² But the remedy proved worse than the disease, as subsequent developments will show. The matter of mortgage taxation was as little understood as the other phases of the subject. By some peculiar impulse, the legislature of 1873 enacted a law exempting mortgages from taxation, the purpose of the act, as expressed in its title, being "to promote the improvement of real estate by exempting mortgages and other securities from taxation."³ With the farmers, the law had an immediate and overwhelming unpopularity. At their state convention in Topeka the same year they passed resolutions asking for its speedy repeal. The next legislature heeded the request and promptly repealed the law.⁴

Interest in tax affairs waxed sufficiently strong to demand the creation of a special tax commission in 1872, which gave a report the next year. But no important and permanent changes were made till the complete new tax law of 1876. This is an elaborate act, comprising twenty articles, and repealing practically all the tax laws before it. It was an attempt to correct in-

² *Laws of Kansas*, 1870. Chapter on Taxation.

³ *Laws of Kansas*, 1873, ch. 140.

⁴ *Laws of Kansas*, 1874, ch. 180.

equalities, and especially to reach personal property. Additional duties were imposed on assessors, and more stringent regulations on persons making returns.

Among its more important provisions we may note the following: Bona fide debts were to be subtracted from credits; all property was to be valued at its true value in money; banks were to continue the practice of paying the tax on all the shares of the stockholders (minus their real estate taxed locally); railroads were to be assessed by a state board, and the auditor was to levy the tax in unorganized counties; real estate, including all improvements, was to be assessed every two years from an actual view taken by the assessor; personal property was to be assessed annually, and, as before, the assessors were to meet and agree upon an equal basis of valuation.

The immediate effect of this act made it appear a success, for it seemed to be fulfilling its purpose admirably. The assessment of personal property was raised at once from \$19,400,000 to \$23,000,000, an increase of 18 per cent. in one year. The railroad assessment was raised from \$12,000,000 to \$16,000,000, an increase of 33 1-3 per cent. This relatively high assessment of personalty held out for eight years then the proportion of this kind of property rapidly declined in the assessment rolls for thirteen years. (See Appendix A.) The particulars of railroad taxation are detailed below, under the paragraph on railroads.

That the entire law of 1876 was not a successful piece of work, we can judge from the fact that at the next session of the legislature, only one year later, one article of the law was repealed entirely, and four amendments were added. Attacks were all directed at the law, and not at the system itself.

It was in the year 1879 when the legislature discontinued the levy of a direct state tax for common school purposes. This was accomplished by the repeal of the "one-mill levy law 1861."⁸ Thereafter the income of the annual school fund was derived principally from interest upon the invested permanent school fund. Local taxation, it must be borne in mind, produced the

⁸ *Laws of Kansas*, 1861, ch. 76, Sec. 5. "There is hereby levied and assessed annually one mill on the dollar for the support of the common schools of the State."

bulk of the income supporting the common school system. The one-mill levy was about equivalent to one month's wages for every teacher.

Income.—The state income during this period was not deranged by any wars or very serious disturbances of any kind. Direct tax furnished over 99 per cent. of the state's revenue. There were but slight fluctuations in the rate of the levy, and only a little variation in the total assessed valuations. The principal change occurred in the year 1876, under the stringent new law described above. This tax rate was lowered, but the revenue produced was greater than that of the year before. Particulars for each year can be seen in the short table below:

TOTAL ASSESSED VALUATIONS, LEVY AND RATE OF STATE TAXES,
1870-1879.

Year.	Assessed valuation.	State levy.	Rate in mills.
1870.....	\$62,528,100	\$309,621	8¼
1871.....	108,753,575	652,521	6
1872.....	127,690,937	1,085,373	8½
1873.....	125,684,177	754,105	6
1874.....	128,906,520	773,439	6
1875.....	121,544,344	729,286	6
1876.....	133,832,316	736,078	5½
1877.....	137,480,530	756,138	5½
1878.....	138,698,811	762,843	5½
1879.....	144,930,280	942,046	6½

Fees, principally from insurance companies, began to form an item of income to the state at this time. They ranged from \$10,000 to \$15,000 a year. The tendency was plainly towards increasing this source of revenue. Within a few years, as we shall see, the number of fees was greatly multiplied, until they became of real fiscal significance.

Extraordinary revenue was only needed for two purposes; one, as mentioned before, relief for frontier settlers suffering from grasshopper devastations, and the other, defence against Indian raids along the southwestern border. For these two purposes, bonds were issued, and on terms showing that the credit of the state was at last sound. Considering the eastern money market, however, the rate of interest was rather high. Full particulars of these bond sales are exhibited in tabular form below:

BOND STATEMENT, 1870-1879.

Issued under act of	Date of issue.	Purpose.	Rate of interest	When due.	Face of bonds.	Amount sold for.
Oct. 15, '74	Oct. 15, '74	Relief.	7	Oct. 15, '94	\$5,000	\$5,000
Oct. 15, '74	Oct. 15, '74	"	7	Oct. 15, '94	7,000	7,000
Oct. 15, '74	Oct. 15, '74	"	7	Oct. 15, '94	500	500
Mar. 6, '75	Mar. 15, '75	Military.	7	Mar. 15, '95	36,500	36,500
Totals...					\$49,000	\$49,000

Thus we see that only \$49,000 of income during this whole period was derived from the sale of bonds. The preeminence in bond issues now passes from the state to the municipalities.

Expenditure.—In the matter of expenditures for this decade we see a further expansion of the budget. Outlay along old lines increased, and new subjects of expenditure were introduced. In 1870 the state entered the domain of private charity, granting a subsidy of \$10,000 to a purely private institution. This was the entering wedge. Soon the list of private charities receiving state aid had multiplied many fold. For the supervision of insurance, a state department of insurance was next established. Then for collecting and preserving historical matter pertaining to the state, an Historical Society was organized. In 1878 a Fish Commission appears for the first time. The first step taken to establish a purely state industry was in 1879, when we find an appropriation made for a coal mine at the state penitentiary. Other industries were developed later at this institution. On the subject of immigration the legislature had grown apathetic. Governors, however, urged the matter on their attention, and requested that they would at least issue pamphlets in English, German, and Scandinavian, for the purpose of drawing a desirable class of settlers to the vast prairies of the state. This work passed into the hands of the Board of Agriculture, where it was well taken care of, and the separate Board of Immigration ceased to exist.

Fiscal Affairs.—In the management of fiscal affairs during this period, the treasurer was not embarrassed with a deficit so frequently as had happened before. For in the preceding period it had been necessary every year to tide over the deficit by stamp-

ing warrants unpaid. During the first four years of this period interest on such warrants was paid by the treasurer to the amount of \$51,414.⁶ And then, for the first time, the treasurer was able to pay all warrants as presented, and this condition held good for many years.

State bonds to the amount of \$209,500 fell due this period and were promptly paid. \$204,000 was in 7 per cent. bonds, and \$5,500 in 10 per cent. bonds. This lessened the state's annual burden of interest by \$14,830.

The sinking fund proved a source of contention and controversy till a satisfactory adjustment was made by the law of 1875. A serious attempt was made to violate this fund in the year 1870. A joint resolution was adopted, to appropriate a portion of the sinking fund to the payment of "current legislative expenses and the salaries of Supreme and District court judges." The governor vetoed the act as an unwarranted assumption of authority, since it created a "favored class of creditors of the State to the detriment of those with whom the people in their sovereign capacity, have made a sacred contract." He showed this to be in violation of the constitutional provisions, that the legislature shall provide each year for raising revenue sufficient to defray the current expenses of the state,⁷ and that the proceeds from no tax shall be applied to any other purpose than that for which the tax was levied. He referred to the effect on public creditors and taxpayers. His veto was, however, overruled by a two-thirds majority in each House. The alternative of the members was to take their pay in the depreciated scrip of the state, or make an "unwarranted attack on the sinking fund." They chose the latter. An injunction was issued against the payment of the members from this fund, and a revenue bill passed to provide for the fiscal year 1870-71. This bill provided for the redemption of the state scrip which had depreciated in value and become an injury to the public credit.

The investment of the sinking fund, up to the year 1875, was

⁶ *Auditor's Report*, 1873.

⁷ This was the constitutional provision till amended, Nov. 2, 1875. Provision was then made for revenue sufficient for two years. Following this change, in the year 1877, the sessions of the legislature became biennial instead of annual.

under the confusing and conflicting provisions of twenty-one separate acts. No particular person was made responsible for its investment, nor was any clear method of investment established. "The result," says the vigorous auditor of 1874, "is what might have been expected from such vague, loose and shabby legislation. The fund invests itself, as it sees fit, in its own good time, and in such manner and amounts as are convenient."

The 1875 law created a board of three commissioners (governor, auditor and secretary of state) to invest this fund, either in Kansas bonds, or United States bonds.⁸ This removed all ambiguities from the law, and ensured a proper administration of this fund.

The permanent school fund proved a hard one to manage successfully, although it had been left with a commission from the beginning. Wisely or unwisely, a law was passed enlarging the powers of the commission by authorizing the investment of this fund in school district bonds. This had two evil results. Many bogus and fraudulent bonds were sold by rogues to the treasurer, and thus the school fund was defrauded of a large amount of money. Since the treasurer was a party to the fraud, the state was fully reimbursed later, for ample safeguards had been provided against a defalcating treasurer. The second evil was the over-issue of school district bonds which was thereby encouraged. We see this illustrated in many counties, one of which we may take as typical, namely, Sumner county in the south-central part of the state. A local paper here describes the situation in this language: "The school tax in district number 11 is 4.5 per cent., making over \$20 per quarter-section [160 acres], just for school purposes. One quarter has \$23.40 school tax, which with State, county and township added, runs it up to between \$35 and \$40. No quarter in district 22 has less than \$22 school tax. One quarter in district 25 has \$32.04 school tax; all the remaining taxes on it are only \$11.05, making \$43.09 on a single quarter-section. The district has \$1,500 of bonds and only six quarters of land taxable. The taxable personal property in this district is all owned by one man, and he has gone to Iowa.'"

⁸ *Laws of Kansas*, 1875, ch. 143.

⁹ *Wellington (Sumner county) Press*, Oct. 8, 1874. Quoted in *Auditor's Report*, 1874, p. 41.

Examples of frauds and excesses soon called forth new laws on the subject of the administration of this fund. A law in 1876 provided that it should be invested only in United States or Kansas State bonds, but also interposed the requirement that the fund should in no case be diminished, that is, that no bonds should be bought above par. This barred out the purchase of federal bonds. And the amount of State bonds was too small to purchase the entire permanent school fund. So the difficulty remained to be solved by subsequent legislation. The size of this fund increased rapidly throughout this decade, being increased from four different sources;—the sale of school lands, the proceeds of escheated estates, 5 per cent. on the sale of all government lands in the state, and the fees of insurance companies registered in the state under the law of 1871.

Claims.—The matter of the Price Raid claims was successfully brought before Congress in 1871, by the state agent. The Kansas auditing committee had allowed some \$500,000 on these claims, but Congress scaled the amount down to \$337,000, and this amount was paid over to the state.¹⁰ The treasurer disbursed it on claims in the order of their presentation, till it was exhausted.

Insurance.—The subject of insurance began to be of fiscal importance to the State in this period. As early as 1863 the governor of the state had called attention to the fact that all the insurance was by foreign companies, who therefore paid no taxes, having no property in the state. Tax them, he said.¹¹ Nothing, however, was done, and, seven years later, another governor reminded the legislature that the insurance business had become important in the state.¹² In the year 1871, the Insurance Department was created, and regulations adopted necessary for the safety of policy holders.¹³ The young department had a hard

¹⁰ Hazelrigg, *History of Kansas*, p. 164.

¹¹ *Inaugural Message of Gov. Carney*, 1863.

¹² *Message of Gov. Harvey*, 1870.

¹³ (*First Annual Report, Supt. of Insurance.*) Fees charged Insurance Companies under 1871 Law.

- | | |
|--|-------|
| a. Filing and examining charter and issuing certificate..... | \$50. |
| Filing and examining statement..... | 50. |
| b. Benefit of School Fund..... | 50. |
| c. Each license issued to agents..... | 2. |

struggle to survive for the first few years. The pugilistic auditor of 1874 vigorously attacked it as "rotten from stem to gudgeon."¹⁴ But it very creditably stood a searching investigation by a legislative committee, and finally established a conviction of its usefulness.

In 1876, 78 companies were doing business in the state, and paid fees that year to the amount of \$12,788.96.¹⁵

Railroads.—Kansas railroads during the seventies experienced a period of rapid expansion, followed by a reaction. Municipal aid was lavishly bestowed during the early part of the period. The extent of these subsidies can be seen in the statement below:¹⁶

MUNICIPAL AID TO RAILROADS, 1870-1878.

1870	\$1,189,000
1871	880,000
1872	950,000
1873	249,000
1874	358,000
1875	89,600
1876	61,800
1877 }	646,000
1878 }	
Total	4,824,000

This was simply a phase of the railroad-building epidemic sweeping over the whole country. Only Kansas seemed to be the hot-bed of the disease. The process was ruinous to both the people and the roads, for the need of roads was oversupplied and many roads long remained non-dividend paying.

Much experimenting was done at this time with the methods of taxing the railroads of the state. An abortive attempt was made in 1871 to establish a State Board of Assessors as a permanent part of the tax machinery.¹⁷ The law was good, but proved to be five years ahead of public opinion. Corruption was scented by the reformers of the state, and the cry went up that railroads were not paying their share of taxes under the State Board as-

¹⁴ Auditor Wilder's Report, 1874; Governor Anthony's Message, 1877.

¹⁵ Message of Gov. Osborn, 1876.

¹⁶ Compiled from *First Ann. Report, Board of R. R. Commissioners*, p. 42-46, and *Auditors' Reports*, 1874 to 1878.

¹⁷ *Laws of 1871*, ch. 150.

assessment. The law was repealed in 1874, and the old method of assessment by city and township assessors re-instated. A crude provision for ensuring equality was incorporated in the law in these words, "Such property shall be treated in all respects in regard to assessment and equalization the same as other property belonging to individuals, except that it shall be treated as property belonging to railroads, under the terms, 'land,' 'railroad track,' 'lots,' and 'personal property.'"

Returns made under this system of assessment very naturally show some queer cases of equality. Injustices between localities were aggravated prodigiously. County clerks' returns show cases like the following:¹⁸ The Atchison, Topeka & Santa Fe was valued at \$3,067 per mile in one county, and \$6,254 in the next.¹⁹ The Atchison and Nebraska railroad was assessed at \$3,652 a mile in Atchison county, and at \$10,384 in the adjoining county. It is unnecessary to multiply these illustrations. They show the fallacy of treating railroads as fractional bits of individual property scattered over the different counties. The law was elaborately amended the next year, but still leaving sworn statements to county clerks the basis of assessment. Gross and net income, earning capacity, etc., seem to have been treated by the law as playing an unimportant part in the road's ability to pay taxes. On the other hand, the law covers these points: Right-of-way, track, roadbed, ties, weight of iron or steel in tracks, what joints or chairs are used, ballasting (gravel or dirt), buildings on right-of-way, length of time iron in track has been used, rolling stock, capital stock (authorized and paid up), market value, "total listed valuation of all tangible property in the State." All these things, the law says, are to be considered as personal property. Then, as a sort of postscript to this law, franchises are mentioned, with the stipulation that they are to be listed and assessed with other personal property.

This law as amended survived but a single year. Then the tax law of 1876 took its place, as described on a preceding page. The State Board of Railroad Assessors was revived, and, now

¹⁸ *Auditor's Report*, 1874.

¹⁹ Reno and Sedgwick counties.

that the Grangers had made their demonstrations, room was not left for the criticism that the roads were assessed too low.

Municipal Finance.—The history of municipal finance during this period centers largely about one point, namely, the bond registry law of 1872.²⁰ There was a vague, general feeling over the state that new municipalities were getting heavily involved in their debts of different kinds, but there was as yet no social consciousness of the real magnitude of these obligations. It was deemed advisable, therefore, to provide by law for the registry of these bonds with the auditor of state, partly that the actual conditions might be known, and partly that the bonds might have a better standing with the money markets of the East. This was a comprehensive law, called by its critics a modern machine for making bonds at wholesale. By it, every local division was authorized to freight itself with debt beyond even the possibility of payment. The law provided for three things: The amount of bonds to be voted; their registry; and the manner of their payment. Bonds were permitted to the amount of 10 per cent. of the total taxable property of any municipality. This was the general rule. But each county could issue \$100,000 in addition to the 10 per cent. limit, and if the county had an assessed valuation of \$3,000,000 or over, it could issue \$200,000 of bonds beyond the 10 per cent. limit. And each township, if it had less than \$200,000 of taxable property, could vote aid to any railroad at the rate of \$600 for every mile within the township. And as a final proviso, this act did not apply to any bonds previously voted, or vote then pending.

A concrete case will illustrate the import of this section of the law. Take Leavenworth county, for example. Its assessed valuation was \$8,863,665, so that under the law it had a right: (1) to borrow (10 per cent. on valuation) \$886,000; (2) to increase this debt by \$200,000; and (3) any debt previously voted, not included (x).

Leavenworth county issued bonds to the limit. The population of the county was 32,444; the debt contracted, \$1,100,000, or \$200 per family.

²⁰ *Laws of 1872*, ch. 68.

As to the registry of these bonds—holders of the bonds were to present them to the state auditor for registration. "If the bonds are genuine," reads the statute, "he shall under his seal of office certify upon such bonds the fact that they have been regularly and legally issued, that the signatures thereto are genuine, and that such bonds have been registered at his office according to law."

This was imposing duties on the auditor which he had neither time nor inclination to fulfill.

Touching the payment of these bonds, we find the most striking provision of all. It was made the auditor's duty to assess each year the municipalities for an amount necessary to pay the accruing interest on their bonds, and to create a sinking fund for their final redemption. This sum was to go into the hands of the state treasurer, and to be by him disbursed in the payment of interest and principal when due. This made the bonds, virtually and in fact, as good securities as the state bonds themselves.

New York financiers, floating these bonds, exploited this law freely. They issued pamphlets proclaiming that they had for sale "Seven Per Cent. County Bonds: Registered by State Auditor: Interest and Principal paid by State Treasurer."²¹ *The Commercial and Financial Chronicle* of New York, commended this law to the attention of capitalists.²² "The passage of this law by the Legislature of Kansas," said the *Chronicle*, "was apparently a good policy, as it gives an additional assurance of security to the various issues of city, county and town bonds."

The law facilitated debt-making too much. It failed of popularity in Kansas. The Farmers' Convention in Topeka—the same that opposed the exemption of mortgages from taxation—drew up resolutions, affirming that "the practice of voting municipal bonds is pernicious in its effects, and will inevitably bring bankruptcy and ruin upon the people, and we are therefore opposed to all laws allowing the issuance of such bonds."

The state auditor was hostile to the law since he had no means of determining when bonds were "regularly and legally issued,"

²¹ *Kans. Misc. Pamphlets*, vol. I, No. 15; in Wisconsin His. Soc. Library.

²² Vol. xiv, p. 457. Apr. 6, 1872.

without making a personal investigation, nor could he know whether the signatures were genuine. Nor did he even like the greater security given to the bonds by his official seal, for, as Auditor Wilder tersely said, "Rogues know this." Swindles were soon perpetrated under the act. Fraudulent bonds were issued for three imaginary cities in Cherokee county, Gregory, Cloud and Budlong,—and these bonds were bought by a New York Banking House for \$68,000. "We are acquainted with one transaction," says the *New York Commercial and Financial Chronicle* of this date, "when \$100,000 of such bonds were cashed (not by an infant or an idiot either), to find a few months later that the city issuing them never existed except on paper."²³

The treasurer refused to obey this law. He disliked the provision for the payment of municipal interest and debt through the state treasury. Although the law was mandatory, he refused to open separate books for municipal bond business.

The law was soon modified to such an extent that it amounted almost to a repeal. The amount of indebtedness allowed was reduced from 10 per cent. to 5 per cent. of taxable property, except in cases of bridges and county poor houses, and the auditor was relieved of the duty of making the annual levy of taxes for interest and sinking fund. The registration feature, however, was very wisely left in force.

Opinion concerning municipal aid to railroads crystallized into two statutes in 1876.²⁴ A majority of two-thirds was sufficient to authorize a subsidy, and the limits set were for a county, \$100,000 and 5 per cent. of the taxable property, and for a township or city, \$15,000, and 5 per cent. of its taxable property; *provided however*, that in no case should the total aid granted exceed \$4,000 a mile. This was a general law, but it is interesting to notice how frequently subsequent legislatures allowed special exemptions from its operations.

The voting of municipal aid to private industries was going on at a lively pace till a court decision in 1873 gave it a temporary set-back. For instance, in 1870 the city of Burlingame,

²³ May 6, 1876.

²⁴ *Laws of 1876*, chs. 106, 107.

Osage county, was authorized to vote \$25,000 in bonds to aid in establishing a woolen mill in that city.²⁵ In 1872, Smoky Hill township, Mc Pherson county, was authorized to aid in erecting a flouring mill and to vote \$6,000 in 10 per cent. bonds.²⁶ In 1873 we find both general and special laws of the same tenor. Counties of over 30,000 population are authorized to issue bonds to the amount of \$41,000 to aid in the construction of starch works.²⁷ An examination of the session laws of this year will show a record like this:

Rice county is authorized to issue \$7,000 in bonds to "develop coal beds."²⁸

Grasshopper Falls township is authorized to issue \$20,000 in 10 per cent. 10-year bonds, to aid manufacturing enterprises.²⁹

Parker township, Morris county: \$10,000, 10 per cent., 15-year bonds, to aid coal and manufacturing company.³⁰

Home township, Nemaha county: \$25,000, 10 per cent., 5-year bonds, for prospecting for coal, oil and gas.³¹

Kentucky township. Jefferson county: \$10,000, 7 per cent., 10-year bonds, to build a flour mill.³²

Blue Rapids township, Marshall county: \$10,000, 10 per cent., 10-year bonds, to aid a manufacturing establishment.³³

Atchison county: \$150,000 to aid a railroad.³⁴

The important legal questions involved in these bond issues were brought before the Kansas Supreme Court in the case of the *Commercial National Bank Cleveland vs. the City of Iola*.³⁵ Here it was held:

(1) *Special Laws* are unconstitutional and void.

(2) *Private Enterprises*, taxation in aid of, is void.

(3) *Taxation: Object and Purposes*: Taxation is a mode of raising revenue for *public purposes*. When it is prostituted to

²⁵ *Laws of 1870*, ch. 36.

²⁶ *Laws of 1872*, ch. 85.

²⁷ *Laws of 1873*, ch. 33.

²⁸ *Ibid.*, 1873, ch. 37.

²⁹ *Ibid.*, 1873, ch. 39.

³⁰ *Ibid.*, 1873, ch. 41.

³¹ *Ibid.*, 1873, ch. 44.

³² *Laws of 1873*, ch. 48.

³³ *Laws of 1873*, ch. 51.

³⁴ *Laws of 1873*, ch. 52.

³⁵ 9 Kans. 689.

objects in no way connected with the public interests, it ceases to be taxation and becomes plunder; and the establishment of a bridge manufactory or foundry, owned by private individuals, is essentially a private enterprise.

(4) *Municipal Bonds: Want of Power to Issue, Notice of Presumed:* Bonds issued by a municipality in aid of strictly private enterprises, are void—void from the beginning, and void into whosoever hands they may have come.

The state attorney, citing this decision, said all bonds of this description were void, and money collected from the people to pay them, was not taxation but robbery, and no officer should levy and no person should pay such a tax.³⁰

One would naturally expect this decision to have a deep lasting effect upon the bond legislation in Kansas. But such was not the case. There was some latitude left for the interpretation of the phrase "private enterprise." Railroads, of course, did not come in this class. Many people considered flouring mills as being something more than private enterprises. The passage of special laws received but very little check indeed from this decision. So, on the whole, the effects of the decision were only temporary, although a period of debt repudiation was initiated by it.

Leavenworth county and city furnish one of the most conspicuous cases of municipal debt repudiation of this period. Holders of bonds of these two municipalities brought a motion before the United States Circuit Court in 1878, against the officials of the above corporations to attack them for contempt for not making a tax levy to pay the judgment on the coupons of their bonds. The citizens of the county arose against the procedure and upheld their officials in disobeying the court. The debt of the county and city had run up to over \$2,000,000, twice the state debt. A compromise, as was usual in these cases, was effected and the creditors had to be satisfied with the payment of the debt as thus scaled down.

An official report before a special session of the legislature in 1875 shows what excesses these municipalities of the state indulged in, and how inevitable compromise or bald repudiation

³⁰ *Auditor's Report*, 1873, p. 14, 15.

was.³⁷ This was the period of reaction in the state, and this report before the legislature showed the following deplorable conditions:

(1) Harper county had but 641 inhabitants and a bonded debt of \$40,000, or \$62.40 per capita.

(2) Comanche county had only 634 inhabitants, and a bonded debt of \$72,000, or \$113.57 per capita.

(3) Barber county had but 608 inhabitants, and a bonded debt of \$141,300, or \$232.40 per capita.

Considering a family as consisting of five persons, Barber county found itself burdened with a hopeless debt of \$1,162 per family.

And yet this was practically only the beginning of municipal debt-making in Kansas. Where compromises were not attempted, the debt was usually refunded, and thus the burden of debt paying was put off some twenty years, that is, till in the nineties. At that time the burden did not prove any lighter.

³⁷ *Laws of Kansas*, Special Session, 1875, ch. 2.

CHAPTER VI

CRAZE IN RAILROAD EXPANSION, 1879-1889

This was a decade of expansion in Kansas. The reaction of '74 had been forgotten. Railroad building was pushed with unheard-of rapidity, over 6,000 miles of new line being constructed in ten years. Expansion grew into speculation, especially during the years 1883 to 1888. Eastern capital was lavishly loaned, not only to further the railroad enterprises, but also on mortgage security. The business of banking was practically unregulated by the state, and remained so till the passage of a banking law a few years later. This gave rise to an irregular system of banking, for many institutions that had originally been organized as real estate loan companies, and many individuals and firms were engaged in receiving deposits, while their principal business was entirely foreign to legitimate banking.¹ Many of these alleged banks had not only their entire capital, but a large portion of their deposits invested in unproductive and unsalable real estate.

Building and loan associations sprang into prominence during this period. First came the local associations of the small towns, usually organized for the sole purpose of assisting in building homes for persons of moderate means. Their boards of directors were as a rule composed of substantial business men, serving without pay. These were fruitful of much good. But these local institutions popularized the loan association business, and soon advantage was taken of this by bogus concerns, principally "national" building and loan associations. These began about 1880 to operate extensively in the state and were soon transacting millions of dollars' worth of business,

¹2 *Bien. Report, Bank Comm.*, 1893-04.

largely with eastern capital. The state furnished no official supervision or scrutiny of these concerns, until the whole commonwealth was overrun with them. Many of these companies were "organized by men wholly unfitted by experience to conduct this business successfully, and others were organized, judging from their manner of transacting business, for the sole purpose of robbing their customers at both ends of the line. Companies with an alleged capital of \$25,000, \$50,000, or \$100,000, with probably not more than 10 per cent. paid up, did not hesitate to guarantee the payment, both principal and interest, of loans amounting to millions of dollars, which were often disposed of through gross misrepresentations as to the value of the securities and the standing of the companies. When the time for the payment of these obligations arrived, troubles began."²

This was a period of speculation, as has been said. Irrigation was being pushed in the arid region of the state. This was the season of eastern speculation in real estate mortgages. For it was at this time that Kansas had the unenviable record of leading the whole United States in the per cent. of her mortgaged farms. Much over half of her farm land was mortgaged. If we may accept the returns of the Eleventh Census on this point in the years 1886, 1887, 1888, 1889 and 1890 the per cent. of mortgaged lands of the total farm land was 60.38, 68.92, 72.70, 70.29 and 60.32 per cent. respectively.³ Only two other states, Nebraska and South Dakota, had over half their land mortgaged.

The question of the prohibition of the manufacture and sale of intoxicating drinks in Kansas came to a decision at this time. It was of course a social question of subsidiary fiscal importance in local finance. For many urged the argument that saloon license fees were necessary for the support of the city schools. But when the matter was put to the people, a constitutional

² *Report Bank Comm.*

³ *11th Census: Volume on Real Estate Mortgages.* The States nearest the Kansas record of 1890 were—

S. D...	51.76 per cent.	Ia....	46.95 per cent.	N. Y....	40.43 per cent.
Nebr...	54.73 per cent.	D. C...	51.25 per cent.	N. D....	46.73 per cent.

amendment was adopted forever prohibiting the manufacture and sale of intoxicants in Kansas.⁴

Tax Laws.—The tax laws of this decade represent little change of any importance or wisdom. Each governor discussed the subject in his message to the legislature, urging revision of the laws. Such revision was needed, Governor Martin argued, because the laws' defects, universally recognized, were organic.⁵ But the short biennial session of the legislature gave little time or opportunity for devising any new methods of taxation, or improving on the old. The stereotyped exhortation of "rigid economy," sounded in each gubernatorial message, together with the jealousy of the public over new expenditures influenced the legislature to refrain from incurring the expense of a tax commission of any kind. So the matter drifted on till sufficient grievances were accumulated to command popular attention. But it was over a decade after the close of this period when a tax commission is heard of again. The principal tax legislation at this time pertained to railroads and Pullman sleeping cars, and this will be explained under the discussion of railroads below.

Income.—The income of the state during this decade was sufficient to meet all current expenses, and was free from any violent fluctuations. As Governor St. John expressed it in 1881; "We are creating no new debts, but pay as we go." In fact there was regularly a surplus in the treasury of considerable magnitude, although the tax rate was lower than at any previous time. Since the tax laws remained uniform throughout the period, the total assessed valuations reflected the same uniformity, increasing gradually from year to year till 1889, when a maximum was reached. Then began a period of decline.

State treasurers reported assessed valuations and taxes as follows:

⁴ Amendment adopted Nov. 2, 1880.

Vote for.....92,302= 52½ per cent.

Vote against...84,304= 47½ per cent.

Majority for.. 7,998= 4½ per cent.

⁵ *Message of Gov. Martin, 1889.*

**TOTAL ASSESSED VALUATIONS, LEVY AND RATE OF STATE TAXES,
1880-1889.**

Year.	Assessed valuations.	State levy.	Rate in mills.
1880.....	\$160,570,761	\$883,139	5½
1881.....	170,813,373	854,066	5
1882.....	186,128,139	837,576	4½
1883.....	203,184,489	873,693	4¼
1884.....	237,020,391	1,066,592	4½
1885.....	248,846,811	1,032,714	4¾
1886.....	277,113,323	1,186,134	4¼
1887.....	310,871,447	1,274,573	4¼
1888.....	353,248,333	1,448,318	4¼
1889.....	380,815,073	1,515,423	4¼

Aside from taxation, the state derived a small income from fees and from the industries conducted at the state penitentiary. The principal fees were derived from insurance companies, aggregating from \$15,000 to \$20,000 a year.

Expenditures.—The expenditures of the state during this period show a widening of the field of state activity, and the gradual assumption of new powers and responsibilities. Both the health of the citizens, and their material interests were made matters of public concern and were, to a certain extent, taken into the state's care. This we see in the creation of new "commissions," "boards," "bureaus," etc., and in certain other new lines of expenditure. To give a mere catalogue of these additions to the state's economy during this decade, we have the following list: First, the railroad commission, to secure justice in rates, charges, etc., as between the railroad corporations and the individuals of the state; a mine inspector comes next; a live stock sanitary commission is organized to safeguard the stock-raising interests of the state, especially against incursions of diseased Texas cattle; a labor bureau is now first heard from; the state board of health is created in 1887; a silk commission is also established the same year to transplant this exotic industry to Kansas soil; a wise provision is made at this time for a forestry commission, for the state's needs along this line are beyond question. A sugar subsidy is granted in 1889 to foster the culture of the sugar beet in Kansas, but this, like the silk com-

mission idea above, proves rather chimerical. The beef combine commission of 1889 completes the catalogue of new expenditures for this period.

By an inspection of these functions, we see that some represent mere temporary activities; others permanent. Mine inspection and railway supervision, for instance, must by their very nature remain permanent state activities. Another function discernible in the above list is that of protection, in the same sense as the federal protective tariff is said to be a protection to infant industries. Thus, the silk commission is obviously intended merely to put this young industry on its feet and then let it walk alone. So also the policy of granting subsidies to growers of sugar beets. We see this industrial side of the state developing from year to year. Had the state constitution not expressly forbidden the state's being a party to any works of internal improvement, we would doubtless have seen some extravagant operations in this field. For many times pressure was brought to bear on the legislature for direct and open aid from the state to private enterprises. A typical example is furnished by a case in 1885, when the sorghum sugar industry in the hands of a few private individuals gave promise of at least great possibilities. Their hope of state aid was strong enough to embolden them to seek it. The governor presented their wishes to the legislature in these words, "It is urged by a number of citizens, that the state should encourage this industry, and I call your attention to their suggestion."⁶ But direct aid of this kind had to come from the municipalities.

Fiscal Affairs.—The chief item of interest in the fiscal affairs of this period is the public debt. A little over one-half million dollars of bonded debt fell due. Of this, \$452,500 was bearing 7 per cent. interest; \$101,275, 6 per cent. interest. This was all paid excepting \$103,000, which was refunded at 4 per cent. by an issue of 20-year bonds. These were all purchased by the permanent school fund and hence the state simply had to pay interest to itself on them. The payment of these matured bonds meant a decrease of \$33,631 in the state's annual interest expenditure.

⁶ *Message of Gov. Martin, 1885.*

The sinking fund was wisely administered at this time, under the provisions of the 1875 law. United States bonds to the amount of \$98,600 were purchased at a little above par. These were sold a little later at 119¼, thus realizing for the state a premium of \$18,950.50.⁷ Another large increase to this fund came from the payment of certain claims by the government. The sum of \$332,308.13 was remitted for expenses incurred in "repelling invasions and suppressing Indian hostilities."⁸ There was placed \$282,500 to the credit of the sinking fund; and to the general revenue fund, \$49,808.13.

The school fund was augmented considerably during this period by the sale of school lands. At first the state had been rather prodigal with these lands and loose in her methods of disposing of them, letting them go at under-appraised values. The idea of saving the unearned increment in these lands to the state failed to gain very much favor, and hence the policy of selling them as rapidly as possible was inaugurated. Their increase in value falling thus to the settlers, it was hoped, would stimulate permanent improvements and a more rapid development of the state's resources. Before certain regulations were interposed in 1886, these lands were frequently the subject of speculation in such manner as to defeat the state's aim of permanent improvements. According to the opinion of the state's attorney general, the permanent school fund, up to 1886, had lost at least \$1,000,000 through lack of proper attention to the sale of school lands and through frauds perpetuated by syndicates, speculators, etc. "Before the passage of this act," says the attorney general,⁹ "the practice has been for speculators to hire four young men or at least four individuals, equipped with a wagon and team of horses, cattle or mules, and four little houses made of lumber so arranged that they could be put together with bolts in a very short time. They would come to the center of a section of school land, each locating upon the inner corner of a quarter-section, and there remain for a day or two, until the easily beguiled appraisers appeared, when the lands would be appraised as having been settled upon and im-

⁷ *Treasurer's Report*, 1883-84.

⁸ *Special Message of Gov. Martin*, 1886.

⁹ *5 Bien. Report, Att'y. Gen.*, 1885-86.

provements made to the extent of \$25. The appraisers would disappear, and so would the settlers. The evening or the next morning would find them comfortably settled upon another section of school land, where during the following day they would again be visited by the appraisers, and in this manner they would move from section to section, and it is safe to say that thousands and thousands of acres of school lands have thus been fraudulently sold at \$3 an acre, worth, in fact, from \$3 to \$10."

The most serious faults of this loose system were these:

(1) The control of the sale of school lands was in the hands of those who wanted to buy.

(2) Appraisement was made by immediate neighbors of those who wanted to buy.

(3) Proceeds of sales were reduced by big fees allowed local officers, amounting to from \$12,000 to \$16,000 annually. Defalcations of county treasurers also cost this fund some \$40,000.

The creation of a state land department, under the 1886 act, gave this business the unified and central control which it needed.

Railroads.—This decade stands out above all others in Kansas history for its pre-eminence in railroad building. It has been variously described as a craze, a mania, and even a delirium in railway construction. The figures themselves are an eloquent description of the situation and so they are presented. For convenience's sake, the table also shows the subsidies granted each year:

RAILWAY MILEAGE (MAIN TRACK) AND SUBSIDIES, 1879-89.

Year.	Total mileage.	Yearly increase.	Municipal subsidies.
1879.....	2,444	112 }	
1880.....	3,478	1,034 }	\$1,067,540
1881.....	3,701	223 }	
1882.....	3,786	85 }	589,485
1883.....	3,870	84 }	
1884.....	4,020	150 }	239,500
1885.....	4,181	161 }	
1886.....	4,522	341 }	961,000
1887.....	6,212	1,690 }	
1888.....	8,312	2,100 }	8,544,350 50
1889.....	8,721	409	804,250 (including 1890.)
Totals.....	8,721	6,277	\$12,206,325 50

These totals do not include the 142 miles of increase from 1878 to 1879, but only show the increase for one decade, which is 6,277 miles. The remarkable increase of 2,100 miles was made in the year 1888. This was as much as had been built during the first twenty-five years of the state's history. And in these first twenty-five years population had increased six-fold, or from 107,000 to 650,000. But during this decade of railroad expansion while the roads increased 257 per cent., population increased only 75 per cent. This shows that there was too much of a stimulus somewhere and a glance at the right-hand column in the above table will show where it was.

A change in public feelings towards railroads begins to show itself in this period. We no longer find them referred to proudly as "these grand enterprises." Instead, they are called a source of anxiety and apprehension.¹⁰ The actual status of public opinion on the railroad question was summed up in a masterly manner in Governor Glick's message of 1883, and an extended quotation from this will be very much in point. He said, in part, "It is a recognized fact that the railroads have, in a sense, made the state. They have by means of circulars and pamphlets extensively advertised the state, and thus brought it to the attention of thousands of immigrants who have settled among us, and are now an important class of our population. They have aided in the general material development of our resources, and have proved themselves an invaluable agency; and all this is thoroughly appreciated by the public.

"While this is true, it is equally true that the state has made the railroads; so that a mutual obligation exists between them. To encourage and promote and aid the building of railroads throughout the state, our citizens very wisely procured from the General Government large grants of lands, supplemented by a donation from our own state of 500,000 acres of our school lands and government and municipal bonds with first-mortgage guaranteed bonds, amounting to about \$27,806,000; so that millions of acres of land and millions of dollars of money have been donated to aid in the construction of the various railroads of the state.

¹⁰ *Message of Gov. Martin, 1885.*

"These generous donations of lands and bonds were made by the people of Kansas for the purpose of building the magnificent railroad system of the state, and for their generous treatment they expected generous, or at least, fair treatment in return, and for years this expectation was fully met. These liberal subsidies at the outset, enabled the projectors of our railroads not only to build and equip and maintain the roads in question in a style second to none in the country, but they also placed the original constructors in a position to greatly enrich themselves as individuals. * * * And yet, profitable as railroad building has been to the construction companies, the state and the people did not complain or interpose any obstacles to the successful construction of railroads, until the passage of the 'consolidation act' [1870], authorizing railroads to consolidate and lease railroads."

Advantage was taken of this act, says Governor Glick, and by methods of "pooling their earnings," "stifling competition," and other "high-handed and outrageous things," the roads did serious wrongs to the people. Another evil adverted to by the Governor was the manipulation of state politics by the railroads. He further complained that the roads were shifting their own burden of taxation on the Kansas farmer. "Never," concludes the Governor, "in the history of the world have any people been subjected to greater abuses than have the people of Kansas for the last five years."

This ringing philippic against the railroads called forth some legislative action on the subject. A state board of railroad commissioners was created. The law provided that this commission should be maintained by a *pro rata* tax on the railroads, according to their assessed valuation, but the Kansas Supreme Court denied the validity of such a law.¹¹ The powers of this commission were much restricted, being principally advisory. However, some results were accomplished in lowering freight rates, lessening discrimination, and curing local disaffections. Complaint was made that more power should be given to this board. This board, of course, had nothing to do with the assess-

¹¹ *First Report, Board of R. R. Commissioners, 1883.*

ment of railroads, that falling to the state board of railroad assessors.

Railroads put out collateral branches for the conquest of adjacent territory—"system perfecting" as they called it. Preliminary surveys were made through the numerous cities, towns, and villages, and very often just outside, or within a few miles of these places. This was to stir up emulation and rival bidding among the municipalities on or near the projected road. For it generally happened that the settlers were already convinced that this prospective road was the one thing wanting to their permanent prosperity. And indeed, today many towns illustrate the force of this railroad factor in making or marring a place, for, scattered over the prairies of the state are numerous towns that, as soon as a railroad came to them, sprang ahead of their neighbors that got no roads. But towns were not satisfied with one road. They were just as anxious to secure a second, and thus become junction points. And in view of these facts, we can understand why such enormous aid was granted by the municipalities.

According to the *Fourth Annual Report of the Board of Railroad Commissioners*, the municipalities, up to the year 1884, had voted railroad bonds amounting to \$9,504,385.50. From July 1, 1885, to November 1, 1886—that is, one year and four months, they voted \$10,151,600. While some of these bonds were never issued, still the amount sold was vast, compared with the wealth of the communities issuing them.

The question may be asked, how could such enormous subsidies be granted under the limitations of the 1876 law? This was a general law, as we saw, limiting county aid to \$100,000, plus 5 per cent. of the taxable property of the county, and with the general proviso that the total amount of aid should not exceed \$4,000 a mile to any railroad.¹² If we examine subsequent legislation, we find repeated instances of special laws exempting municipalities from the operation of this general law.

Mission Township in Neosho county, for example, was permitted to aid Kansas railroad companies to the amount of \$25,000, and was authorized to grant \$4,000 a mile to "any rail-

¹² *Laws of 1876*, chs. 106, 107.

road that may be hereafter constructed through said township." A specific exemption was granted from the limitations of the 1876 law.¹³ Another statute authorized certain townships to vote aid to an amount so that a levy of 1 per cent. would pay the interest on the bonds, and were at the same time made exempt from the 1876 limitations.¹⁴ Still another township, the same year, was allowed to vote aid to the extent of \$25,000.¹⁵

The legislature of 1887 passed another general law, limiting total aid to railroads to \$2,000 a mile.¹⁶ This was, of course, after the mischief had largely been done. The pressure of public opinion was strong enough so that a strict observance of this law might have been expected. But the same legislature that enacted this law passed four other laws tending to weaken it or contravene it directly.

A bond issue of the city of Lyons of \$35,000 was legalized.¹⁷ The city of Winfield was authorized to vote \$50,000 of railroad aid.¹⁸ Ellsworth township had illegally voted \$40,000 in September, 1886, and this action was now legalized.¹⁹ Likewise the action of Cawker township under a previous law, was legalized.²⁰

Many of these bonds were for 30 years at 10 per cent., so that for each dollar received the municipality ultimately returned four dollars. Six per cent. was the lowest rate of interest, but higher rates were the most common.

A great deal of litigation was had as to the legality of these bonds, but the almost invariable result was that the courts affirmed the binding nature of these obligations.²¹

This aid of the municipalities was in addition to the magnificent land subsidies donated by the general government and by the state. The extent of these land gifts is exhibited in the following table:

¹³ *Laws of 1886*, ch. 132.

¹⁴ *Laws of 1886*, ch. 136.

¹⁵ *Laws of 1886*, ch. 137.

¹⁶ *Laws of 1887*, ch. 183.

¹⁷ *Laws of 1887*, ch. 187.

¹⁸ *Ibid.*, 1887, ch. 189.

¹⁹ *Ibid.*, 1887, ch. 193.

²⁰ *Ibid.*, ch. 194.

²¹ *Fourth Ann. Report, R. R. Commissioners*, p. 4, 5.

RAILROAD LAND GRANTS IN KANSAS.²²

Union Pacific (Kansas Division).....	5,087,123	55	acres
Atchison, Topeka and Santa Fé.....	2,980,388	00	acres
Missouri, Kansas and Texas.....	1,041,769	17	acres
Kansas City, Lawrence and Southern Kansas.....	245,574	00	acres
Kansas City, Fort Scott and Gulf.....	89,672	48	acres
Total	9,394,477	15	acres

Counting this land worth \$3.50 per acre—a very low average—we get a total value of \$32,880,670 for these land gifts to the five railroads.

Taxation was escaped on nearly all this land, by the simple method of not perfecting the title on it till it was needed for purposes of sale. Thus the Union Pacific, up to January, 1882, had only taken out patents on 883,772 acres, leaving several millions in its own hands for all purposes except taxation. This represented a loss to the state of some \$250,000 in taxes annually. Here then was a plain case where the unearned increment went to the holders of the land.

A provision appears in the Compiled Laws of 1885, requiring the roads in unorganized counties to pay a tax to the state treasurer, as per the levy of the auditor. This meant a big savings to the state. Roads hauling Pullman or other sleeping cars were made liable for a tax on the same.

Public opinion concerning the Pullman company had about the same tone as it did in matters pertaining to the railroads. Governor Martin in his message of 1887 voiced this feeling very well when he said: "Foreign corporations should be forced to pay a tax on cars used in the carrying trade of Kansas. The Pullman Car Company has never paid a dollar of tax in Kansas. The tax-dodging practiced by these wealthy corporations is not only an outrage on the people who are compelled to bear burdens thus shirked, but is insulting to the dignity and authority of the state." But the climax of objurgation was not reached till the attorney general was heard from. "Notwithstanding the fact," he said, in speaking of the Pullman company, "that this great corporation has spread its arms out all over this country like a

²² *First Ann. Report R. R. Commissioners*, p. 28, 29.

colossal octopus, and is sapping the life out of a traveling public by a system of exorbitant and fixed rates for accommodations, and with its army of half-paid employes, it declines to pay taxes in any State or Territory, except the state of its domicile."²³

The matter of paying taxes was forced upon this company for the first time in 1886, by the state board of railroad assessors. A stubborn fight was made in the courts to evade this tax altogether, but the attempt at evasion was unsuccessful. The Pullman company brought suit in the United States Circuit Court, District of Kansas, praying that county treasurers be enjoined from collecting any tax from this company. The bill of complaint claimed; (1) that the company's domicile and place of business was in Cook county, Illinois, and there was the situs of all its personal property; (2) that the company was not subject to taxation in Kansas; and (3) that it was engaged in interstate commerce.²⁴

The company further set forth that the board of railroad assessors, "in violation of duty, wrongfully and unlawfully assumed to and did assess and value at \$116,246.56 for purpose of taxation the property of said company used in Kansas." There was accordingly levied a "large and burdensome tax, in the aggregate amounting to more than \$3,000."

The matter was pending before the courts for four years, and then the decision was handed down by the United States Supreme Court, to the effect that cars employed in interstate commerce may be taxed.²⁵ Kansas accordingly *pro rated* a tax on Pullman cars in proportion to the miles run in Kansas as compared with total mileage. The earning capacity of the cars was not taken into consideration, but simply their cost of construction as ordinary articles of personal property. A further analysis of this method will be given in a later chapter.

Municipal Finance.—Municipal financial matters during this period were involved largely in aid of railroads, as we have just seen. This was the principal object of expenditure. Other ob-

²³ *Report of Attorney General*, 1887-88.

²⁴ *Ibid.*

²⁵ 141 U. S., 621.

jects for which debts were contracted, were city halls, waterworks, county courthouses, jails, bridges, and school houses. The preponderance of railway aid over other forms of debt-increase is however, characteristic of this period.

The early state laws contemplated a policy of paying all municipal indebtedness when due, and not the refunding of these debts. But the magnitude of these debts became much greater than had been anticipated. Accordingly, the legislature in 1879 passed a law enabling municipalities to refund their indebtedness. This applied to bonded indebtedness only. But these local divisions interpreted it as meaning power to "compromise and refund their matured and maturing indebtedness of every kind and description whatsoever, upon such terms as could be agreed upon, and to issue new bonds * * * in payment for any sums so compromised."²⁸ Bonds were thus issued to pay for county-seat wars, and to meet other extravagant and unauthorized expenditures.

²⁸ *Message of Gov. Martin*, 1889.

CHAPTER VII

MUNICIPAL SUBSIDIES AND DEBTS, 1889-1902

The general features of this period may well be passed briefly in review, before entering upon a detailed discussion of the strictly financial subjects. This period is remarkable for the piling up of huge debts by the local divisions of the state. The state debt, under the constitutional limit of \$1,000,000, can never be of any serious importance to the people, especially as population increases. But here at this time we find the municipal debts running up to a grand total of over \$37,000,000. That is, the interest alone on this indebtedness was annually three times as large as the whole state debt. It is evident from this that "government of the people, by the people and for the people" comes more and more to mean government through the local divisions of the state. This entails a larger debt on the people even than the federal government, as is shown in Appendix E. The one significant thing about municipal debts and municipal subsidies, evidenced throughout this period, is the fact that inasmuch as they lacked any constitutional limitations, they lacked any fixed limitations whatever. For the changing limits set by the state legislatures fluctuated with each recurring session, and even such general regulations as were enacted were emasculated by numerous special exemptions. Evidence in support of this declaration is adduced in a paragraph below on the subject of municipal finance.

The decade, 1880 to 1890, was one of rapid growth for the commonwealth of Kansas, and this seemed to breed a spirit of speculation and adventure. Population increased 43 per cent., reaching 1,427,096 in 1890; the assessed valuation of the state in the same time increased 116.5 per cent. and the amount of

capital invested in manufactures 302 per cent. But the reaction was sudden and sharp. Hard times set in about 1890, followed by three or four years of poor crops. The value of all agricultural products in 1894 was only \$113,000,000, as against \$147,000,000 ten years before.¹ Discontent spread among the farmers. The railroad bonds voted in the late sixties and early seventies were coming due. This led the farmers to lift their voices against the railroads and ask for rate reduction. In 1888 the Farmers' Alliance waxed strong, being a movement similar to the Grange which had died a few years before. In 1890 the Farmers' Alliance came out in politics as the People's Party or Populists. Two years later they elected a governor, and also a majority in the state senate. They stood for radical reforms in railway legislation and in general state economy, claiming that what was needed was a reduction in all taxes. One innovation they attempted in the way of reform was to enact the Ten Commandments into a state statute, with penalties attached.²

The financial panic of 1893 bore heavily upon Kansas. Many railroads were placed in the hands of receivers. Bank failures were numerous. Mortgage indebtedness on farm property was enormous. This represented large investments of eastern capital, and with the money panic came a pressure from the East for the payment of these mortgages in gold. The populists of Kansas were desperately in earnest over the free silver issue and were willing to stake their all on the success of the "cause." Many had come to translate their lack of capital as being simply a lack of silver, and hence they warmly took sides for the white metal. To protect themselves, the farmers secured the passage of the "Gold Mortgage Clause" law, providing that all mortgages and debts to be paid in money should be payable in either the standard silver or gold coins authorized by Congress, all stipulations in the contract to the contrary notwithstanding.³ Whether this legislative fiat on the currency question really entered the domain of private contract and did any good admits of very

¹ *13 Bien. Report, State Board of Agr.*, Part VI, p. 1040.

² House Bill 898, Legislature 1897. Bill read second time and referred to Judiciary Committee; died there.

³ *Laws of 1893*, ch. 99.

serious doubt. Industrial conditions soon changed for the better, so that the danger, supposed to be averted by this act, no longer existed. Mortgage indebtedness also gradually decreased. But the weight of this burden in the early part of this period was simply startling, and shows that there were some just causes for the wail of calamity that went up all over the state. In 1890 there was one mortgage in force for every family of five persons in the state.⁴ The mortgage debt *per capita* was \$170. If we add this private debt to the public debts resting upon each person in the state, we have a grand total of \$210.35.⁵ For the average family of five persons, this meant an indebtedness of over \$1,000. The per cent. of incumbered land in the United States was 28.86, while in Kansas it was 60.32 per cent.

After the panic of 1893-94 came a season of good crops and good prices. Following the legislative session of 1897—a populist administration—the People's Party rapidly disintegrated.

The tax laws and other financial matters of this period show some interesting developments which will now be discussed with some particularity.

Tax Laws.—Discontent with the various tax laws grew steadily during this time. The method of assessment by township trustees came in for a particular share of criticism. Many were in favor of a county assessor with deputies. Discussing the evils of existing methods, Governor Martin (1889) said, "But it is certain that a more unfair, inadequate and objectionable system than that now provided by our laws cannot be devised. Any change, therefore, would be an improvement." Others blamed the administration of the law, rather than the law itself. Governor Morrill condemned the system of township assessors elected for one year. "Now," says he "we have about sixteen hundred assessors, largely men with little practical experience, selected more because they have nothing else to do and are 'good fellows,' each trying to keep his assessment down so that his township may pay less than its honest share of the taxes."⁶

⁴ *Eleventh Census. Volume Real Estate Mortgages.*

⁵ Munic. debt., 25.57; State debt., 0.56; and U. S. debt., \$14.22.

⁶ *Message of Gov. Morrill, 1895.*

Public interest in tax reform had become crystallized enough by the year 1901 to call for the creation of a state tax commission.⁷ This was a temporary commission of eight able men, appointed for the purpose of making a careful and full revision of the tax laws of the state. They were to formulate a new tax bill, embodying the results of their labor. The object of the bill was to be, the statute declared, to secure uniformity in the valuation and assessment of all taxable property in the state; to secure the return and assessment of all taxable property at its full and current valuation; and to simplify the methods of assessment, levy, and collection of taxes. After some seven months' investigation this commission reported a tax bill of 252 sections, based, for the most part, on the Indiana statute. While this bill did not propose a complete revolution in the existing system, yet it did intend to introduce some radical changes directly in line with modern tendencies in taxation. Each proposed change, however, was dictated by a crying need of reform in the existing system. The chief new features of this bill were, briefly, the following. A permanent state tax commission was to be created, consisting of two men with a four year term of service. Each county was to have a county assessor, appointed by the county board, and this county assessor was to have a corps of deputy assessors, selected by the joint action of himself and the county board. In this manner a perfectly supervised system of assessment was to be provided with a central, directing body at the state capitol. The general property tax was to be retained, since the constitution required this. Telegraph, telephone, and express companies were to be assessed no longer solely on the small amount of their tangible property employed in the states, but on a basis of their earning capacity as indicated by the amount of their stocks and bonds. Their local real estate and personal property was still to be left for local assessment, and to be subtracted from their full market value as determined by the state board. The amount of this total market value to be apportioned to Kansas depended on the proportion of mileage in Kansas as compared with total mileage operated. Ocean mileage of express companies was apparently

⁷ *Laws of 1901*, ch. 361.

not to be excluded. The chief innovation of the bill was to be a state inheritance tax of 5 per cent. on collateral inheritances. Many other changes were proposed, but they were of secondary importance.

The bill went before the legislature of 1903, and was discussed throughout the session. The following points took up by far the greater part of the time: shall property be assessed at its full value; shall money, notes and mortgages, and other evidences of debt be exempt from taxation; shall the state funds remain in the county treasuries of the respective counties until actually needed by the state; shall a state tax commission be created; shall we have a county or township assessor.

The bill passed both houses with a few amendments, but the houses could not concur in the amendment providing for the state funds to remain in the county treasuries until actually needed. The trouble did not lie with the bill, but in the fact that one faction of the Republican party had control of the Senate and another of the House. So the bill did not become a law. "Hence," to quote a member of the commission that prepared the bill, "in this State more than one-half of the property goes untaxed."⁸

Real constructive work in tax legislation amounted to very little during this period. The most pronounced gain was the creation of a state board of assessors for the telegraph and telephone companies of the state.⁹ The rapid extension of long-distance telephone service made this step imperatively necessary. The redemption of real estate sold for taxes, which, in 1876 reached the maximum penalty of 50 per cent., was now lowered once more, and fixed at 15 per cent.¹⁰ This was thought expedient, since the delinquent tax list was steadily declining and the use of a heavy penalty was no longer needed.

Income.—The regular income of the state during this period came principally, as usual, from the direct general property tax. About 96 per cent. came from this source, and 4 per cent.

⁸ Personal Letter of Hon. John Francis, of Kans. House of Representatives, Dec. 14, 1903.

⁹ *Gen'l. Statutes*, 1899, ch. 107, sec. 5.

¹⁰ *Gen'l. Statutes*, 1899, ch. 107, sec. 19.

from small fees on insurance companies, oil inspection, bank inspection, etc.

The tax rate was lowered, steadily, till the panic of 1893 caused a big slump in values, and then the old rate would not raise sufficient revenue. This decline in state values began in 1890 and continued in a more or less unbroken course for eleven years. This meant necessarily an increase in the tax rate. These fluctuations are clearly shown in the following table:

TOTAL ASSESSED VALUATIONS, LEVY AND RATE OF STATE TAXES, 1889-1902

Year.	Assessed valuations.	State levy.	Rate in mills.
1889.....	\$360,815,073	\$1,515,423	4 $\frac{2}{10}$
1890.....	348,459,944	1,480,955	4 $\frac{1}{2}$
1891.....	342,632,407	1,353,398	3 $\frac{1}{2}$
1892.....	342,682,846	1,336,371	3 $\frac{9}{10}$
1893.....	356,621,818	1,358,080	3 $\frac{1}{10}$
1894.....	337,501,722	1,316,258	3 $\frac{7}{10}$
1895.....	329,939,031	1,402,240	4 $\frac{1}{2}$
1896.....	321,216,938	1,365,171	4 $\frac{1}{2}$
1897.....	325,370,232	1,333,954	4 $\frac{1}{10}$
1898.....	325,889,747	1,346,126	4 $\frac{1}{10}$
1899.....	327,165,530	1,401,799	5 $\frac{1}{2}$
1900.....	328,729,008	1,807,898	5 $\frac{1}{2}$
1901.....	363,156,045	1,997,304	5 $\frac{1}{2}$
1902.....	363,163,630	1,997,354	5 $\frac{1}{2}$

There were a few small extraordinary expenses provided for at this time by the sale of bonds. These were for the industrial work of the state at the state penitentiary and will be spoken of at greater length under the subject of fiscal affairs below.

Expenditures.—Under the subject of expenditures, we have noted up to this point an interesting and rapid growth in the range of objects of state aid and state support. During this period we see a similar expansion. More attention is given to the immaterial wants, such as literature, science, art, etc., than was formerly done. This we see indicated in the state expenditures for traveling libraries, an academy of science, a battle monument at Chickamauga, etc. For the first time we find the state granting a private pension, \$600 a year, after the manner of the federal government. For the material development of the state, a board of irrigation is made an object of public ex-

penditure in 1895. An important new commission for the supervision of banks is created in 1891. This matter of state supervision is further extended by the appointment of a grain inspector and an oil inspector.

These new activities of the state denote certain important phases of growth. Both the material and immaterial wants are expanding. The growth follows no fixed principle, each new question that arises touching the proper function of the state being dealt with empirically by the legislature then in session. The tendency is plainly manifest, however, for the strong, eastern part of the state to be taxed for the benefit of the weak western portion. Evidence of this is observable in the relief to frontier settlers, forestry bureaus, board of irrigation, sugar subsidies, etc. In the 1902 budget we even find an appropriation of \$5,000 for the extermination of prairie dogs and gophers, which amount to pests in the western part of the state. The theory of the legislators seems to be that the state is a unit, and when one member suffers, the others suffer with it. And thus insurance is wisely provided against avoidable hardships.

The year 1890 was marked by drought and a general crop failure throughout the western part of the state. The legislature appropriated \$60,000 to purchase seed grain for distribution among the needy settlers. This was not, however, a donation by any means. County commissioners were to draw warrants against their counties for the grain received, these warrants to be due and payable one year later, and to be turned over to the state treasurer. The county commissioners were to sell the grain to the farmers on their note, running one year at 6 per cent. interest. Of this fund, \$56,428 was used as intended. Coal was also contributed from the state mine, worth \$4,211. It is due to the railroads to say that the principal roads generously hauled this coal free of charge.

The year 1894 was another period of severity for the frontier settlers. And again the state came to their relief. Two thousand dollars was appropriated for the purchase of coal for distribution among the needy of that section, and \$100,000 for the purchase of seed grain.

In 1897 the act promoting silk culture was repealed, and the

policy of fostering this industry by the state was abandoned. The irrigation and forestry bureaus were combined, since they sought ends so much similar.

The state outlay in subsidies to private charities began with one institution in 1870. By 1880, the number had increased to 4; and by 1902, 21 institutions were on the list, each claiming to be as necessary as the others, and therefore entitled to state aid.¹¹ None is subject to state supervision. The average yearly subsidy for each institution is \$900.

An interesting chapter in the state's budget is that pertaining to the state's experience in protecting the infant industry of beet sugar manufacture. The policy of a state subsidy was launched in 1887,¹² but the legislature forgot to make an appropriation till the next session, two years later. A bounty of two cents a pound was provided for all beet and sorghum sugar made in the state from plants grown in the state. The industry made quite a spurt, and promised big things for the future. The bounty claimed and paid in 1891 was over \$50,000. In that year a populist legislature stood out for retrenchment in all lines of expenditure, and accordingly, the rate of bounty was cut down to $\frac{3}{4}$ of a cent a pound. Evil days then befell the

¹¹ Names of these private charities in chronological order:

Home for Friendless Women, Leavenworth,
Orphans' Asylum, Leavenworth,
St. Vincent's Orphan Asylum, Leavenworth,
Kansas Orphans' Home, Leavenworth,
Samaritan Mission,
Christ's Hospital, Topeka,
Atchison City Hospital,
Topeka Orphans' Home,
St. Francis' Hospital, Wichita,
St. Margaret's Hospital, Kansas City,
Mercy Hospital, Fort Scott,
Bethany Hospital, Kansas City,
City Hospital, Wichita,
Old Ladies' Rest, Leavenworth,
Home of the Friendless, Parsons,
Wichita Children's Home,
Kansas Protective Home Association, Leavenworth,
Rescue Home, Kansas City,
Pittsburg Hospital,
Kansas Children's Home Society, Topeka,
Mother Bickerdyke Home and Hospital, Ellsworth.

¹² *Laws of 1887*, ch. 231.

infant industry. In a few years the bounty was entirely removed. Then came a further decline in the industry, and in 1897 the last piece of sugar machinery was sold and sent to Nebraska where the business was still on its feet.

The actual amount of bounty paid for beet sugar by the state is shown in this brief table:

SUGAR BOUNTIES PAID

1889	\$18,658 30
1891	50,304 08
1892	3,000 00
1893	15,303 83
1895	7,339 29
1896	5,331 00
Total	\$99,936 50

But the irrigation region in western Kansas gave promise of great possibilities along the sugar-beet culture line. And sugar factories were in operation across the Colorado line. So the legislature of 1901 provided for a bounty of \$1 a ton on all sugar beets grown in the state, abandoning the idea of stimulating any more home sugar factories. The limit of this beet bounty was set by law at \$5,000 in any one year. The bounties paid in 1901 amounted to \$1,747.36. The beet farmers this year reported a net profit of \$17.08 per acre.¹³

Fiscal Affairs.—In the management of fiscal affairs during this period the state worked out a new problem for herself in connection with the public industries at the state prison. It was decided to employ the prisoners at useful labor on the state's account, and in industries competing least with free labor, especially union labor. To this end a binder twine plant was established, the market in view being primarily the wheatgrowers of the state. The coal mine, employing from 250 to 400 men, was designed to furnish coal to state institutions only. A brick plant is now operated for the same purpose. But binder twine was intended for the open market, which, as was correctly ex-

¹³ 13 *Bien. Report Bureau of Agriculture*, p. 1118.

pected, was found with the farmers. An enormous plant with elaborate machinery was installed. The purchase of manila fiber and other raw materials represented a heavy initial investment, but only for a short time, for there was a ready market for the finished product. To purchase raw materials, therefore, a "revolving fund" was created, as it was called. Bond issues in amounts from \$5,000 to \$50,000 were made, the bonds bearing 4 per cent. interest and running one year or less. These were purchased by the uninvested moneys in the permanent school fund. In 1900, \$60,000 of one-year bonds were issued to provide for this revolving fund. There was also an issue of \$50,000 which was paid that same year.

It was during this period that a deficit again occurred in the treasury. The funds therein were all in the nature of "balances" of specific funds, and hence not available for use on the general revenue fund. This is in accordance with the constitutional requirement that no money shall be paid out except on specific appropriations. This leaves the alternatives of borrowing or letting state warrants run on interest when stamped unpaid. Both methods were used. The interest paid on stamped warrants in 1901 was only \$12, but in 1902 it was \$8,690.66. This deficit was usually due to the reluctance of each administration to raise the levy for state taxes over that of preceding administrations, for an increase in the levy was likely to provoke charges of prodigality. This has become a custom, although the expanding needs of the state institutions constantly call for increased expenditures.

This period presented the anomaly of having both large deficits and large balances. But, as before explained, the balances could not be applied to the deficiencies. The question of the disposition of these idle sums came in for much discussion by those interested in state finances at this time. Many able thinkers, including Governor Stanley, held that these funds should be deposited largely in private banks throughout the state, at interest, thus securing an income for the state and providing an increased circulation of money. The average balance on hand in the capital city was over one-half million dollars annually. This at 3 per cent. interest would represent an annual

income to the state of \$15,000, besides increasing the circulating medium for the state at large. The extent of these balances is shown in the table below.¹⁴

TREASURY BALANCES, 1888-1902.

Year.	Balance.	Year.	Balance.
1888.....	\$324,882	1896.....	\$804,529
1889.....	338,748	1897.....	385,028
1890.....	715,138	1898.....	412,153
1891.....	461,502	1899.....	496,450
1892.....	727,163	1900.....	510,711
1893.....	895,540	1901.....	577,626
1894.....	842,326	1902.....	627,367
1895.....	710,415		

The permanent school fund, in spite of its safeguards, was several times encumbered with small issues of bogus bonds from frontier school districts. The size of this fund made it a difficult one to administer well and keep invested profitably. School district bonds now became the prevailing securities bought, since the supply of state bonds was running short. In December, 1900, this fund reached a total of \$7,060,821.73, and was all invested but \$68,344.46.¹⁵

The permanent funds were invested in bonds held by the state treasurer as follows:

Permanent school fund	\$6,643,297 44
University permanent fund	148,260 82
Normal school permanent fund.....	200,919 01
Total	\$6,992,477 27

The uninvested funds at the same time were:

Permanent school fund	\$63,650 24
University permanent fund	969 17
Normal school permanent fund	3,725 05
Total	\$68,344 46

The source of these funds, as noted before, was almost entirely the school lands which were sold from time to time. The sell-

¹⁴ 13 *Bien. Report, State Treasurer.*

¹⁵ 12 *Bien. Report, Supt. of Public Instruction.*

ing price in the early periods was extremely low, since there were so few settlers in the state. The amount of these lands sold and the price are presented in the following table:

SCHOOL LANDS PATENTED, 1861-1902.¹⁶

Common School Lands, 1861-1902:

1,522,322 acres: \$5,534,642 97: average \$3 63

Agricultural College Lands, 1868-1896:

78,046 76 acres: \$458,881 91: average \$5 88

University Lands, 1878-1902.

43,713 79 acres: \$180,469 16: average \$2 98

Normal School Lands, 1876-1902:

40,737 38 acres: \$213,514 71: average \$5 24

The University has the lowest endowment and has made the poorest showing in the average price per acre for lands sold. This small endowment means a greater dependence on the bounty and generosity of the state legislature.

Municipal Finances.—The fever of voting municipal aid ran extremely and dangerously high at this time. All former records were surpassed; constraints were brushed aside. The executive messages for years fulminated against the growing burdens of municipal indebtedness, but all to no purpose. The announcement of crushing tax levies failed to terrorize the voters. Buoyant faith in the unbroken prosperity and development of their community led them to hypothecate a large share of their future income. This spirit became rampant during the years from 1886 to 1888, when the local debts were piled up to a sum forty times as large as the state debt.

The bulk of this debt was incurred as subsidies to railroads, but in the early '90's came an overwhelming reaction. Local aid was then directed to industries of a more purely private nature, and the Supreme Court decision of 1873 was apparently forgotten.

An idea of the nature and magnitude of municipal aid during the years 1886, 1887 and 1888 can best be gained by examining a few typical cases. Seven counties are accordingly given in the tabular statement below, together with some of their minor subdivisions. This shows the preponderance, at

¹⁶ 13 *Bien. Report, Auditor of State, 1902.*

this time, of railroad aid, the significance of the debt-burden when compared with population and total taxable property, and also serves to accentuate the transition from railroad subsidies to private subsidies.

MUNICIPAL DEBT INCREASE, 1886-1888.

County.	Population 11th census.	Taxable property.	Total increase in debt.	Increase for railroads.	Railroad Aid Debt in specified municipalities.
Cowley.....	34,478	\$6,906,587	\$332,500	\$285,000	County..... \$100,000 3 cities 88,500 6 townships 97,000
Chautauqua ..	12,297	2,090,860	275,000	275,000	County..... 140,000 7 townships 135,000
Dickinson	22,273	5,130,192	361,500	332,500	County..... 233,000 5 townships. 64,000 1 city..... 35,000
Kingman.....	11,823	3,232,698	246,500	216,000	County..... 125,000 5 townships 91,500
Kiowa.....	2,873	1,647,581	188,000	170,000	County..... 170,000
Ness.....	4,944	1,870,200	164,500	164,500	County..... 75,000 6 townships 77,000 1 city 12,500
Republic.....	19,002	3,154,382	92,500	92,500	.....

This marked the close of the era of large subsidies to railroads. Discussion of this, however, must be postponed to the paragraph on railroads below. But this marked the beginning only of a period of excessive municipal grants to general industries of a public, semi-public, and private nature. The court decision of 1873, as was previously mentioned, put a temporary check on public aid to private industries. Subsequent decisions were in harmony with this opinion. For instance, the Kansas Supreme Court held (in *Gilmore v. Norton*, 10 *Kans.*, 491) that an "act conferring such [corporate] powers limited in its operations to a single city is manifestly a special act conferring corporate powers and is void, being forbidden by section 1, article 12, of the constitution."

The general laws obtaining throughout this period conferred rather liberal powers, even had they been strictly observed. But they were not closely followed, as numerous special acts show.

The General Statutes of 1889 authorized counties to issue

bonds for county buildings, deficits, relief, railroad aid, and subscriptions to promote prospecting for coal, natural gas, artesian wells, and to assist sugar and sorghum mills.¹⁷ Cities of the first class (those having over 15,000 inhabitants) were limited in their powers of taxation to the following levies:

- (1) A tax for general revenue purposes, not to exceed 6 mills.
- (2) A tax for general improvements, 6 mills.
- (3) A tax for paying interest on indebtedness, to the necessary amount.
- (4) A license tax upon all professions and occupations carried on in the city.

Paving, sewerage, etc., require special assessments on abutting property, and hence were not put under the above limitations.

Cities of the second class (those having between 2,000 and 15,000) were limited to a bonded debt of 10 per cent. of their assessed valuation. There was also a general provision made that counties could pay bounties on wolf, coyote, wild cat, fox, rabbit, crow, and gopher scalps.¹⁸ To promote forestry culture, counties were authorized to give a bounty of \$10 an acre for each acre of timber set out and successfully cultivated for five years.¹⁹

These, then, are the general laws on the statute books during this period pertaining to municipal finances. But these were not sufficient to cover the wants of the people. The desire for special acts was irrepressible. In the year 1889, for example, Haskell county was authorized by a special law to make a bond issue of \$10,000.²⁰ This is a frontier county, and hence it was thought that development might be forced if only the initial expense of breaking the sod was obviated. So this bond issue was authorized to provide a fund for paying a bounty of \$1 an acre for breaking sod in this county prior to October 1, 1889.

An examination of the statutes from this time on reveals an almost indiscriminate voting of aid for purposes of drilling gas wells, prospecting for oil and coal, erection of flour mills, cheese factories, etc. By some peculiarity of construction, the

¹⁷ *General Statutes, 1889*, ch. 12a.

¹⁸ *Laws of 1889*, chs. 89, 90, *Laws of 1895*, ch. 358.

¹⁹ *Laws of 1889*, ch. 254.

²⁰ *Ibid.*, ch. 154.

voters seemed to consider a flour mill a public industry, although owned, operated and controlled by private individuals.

To consider briefly a few concrete cases, we may take the session laws of 1891.²¹

Cimarron township, Gray county, is authorized to issue bonds to build a flour mill. This same legislature authorized ten flour mills and three other private enterprises. The history of the Cimarron experiment is brief but striking, and is well exhibited in the session laws of 1897, six years after the flour mill experiment. Kansas at this time held \$15,000 of Cimarron's bonds in her permanent school fund, due in August, 1902. In the statute pertaining to this case, we read the expressive words:²² "Whereas, said city of Cimarron has a bonded indebtedness of \$55,000 and a floating indebtedness of about \$10,000, and is in default of interest due on bonds more than \$15,000, making a total indebtedness of \$80,000, and the property of all kinds in said city has an aggregate assessed valuation of only \$31,351, and said city is insolvent and unable to pay but a small per cent. of its indebtedness * * * therefore * * * the mayor and council of said city desire to scale indebtedness of said city down to a sum upon which they can pay interest and ultimately pay the principal." A compromise was accordingly authorized and effected.

To go back to the year 1889 again—the record of municipal aid this year is interesting. One township is authorized to aid a milling company erect a flour mill by voting \$15,000 of 6 per cent. bonds, running 20 and 30 years. For prospecting for coal and gas, three townships are permitted to vote \$5,000 each; one \$1,500; another, \$8,000 of 7 per cent. bonds. One city is allowed to vote \$15,000 to aid a college situated within its limits.

The legislature of 1893 authorized two townships to vote \$5,000 each in 6 per cent. bonds in aid of flour mills. The next legislature gave permission for one township to extend \$3,000 of aid to flour-mill enterprise. The auditor's bond register for 1900 shows a similar record for municipalities all over the state. Gray county, for example, shows a bond registry

²¹ *Laws of 1891*, ch. 44.

²² *Laws of 1897*, ch. 178.

of \$15,000 for a sugar mill; \$8,000 for a flour mill; and \$2,000 for a cheese factory. Hamilton county shows \$4,000 for a flour mill. Leavenworth county's record is \$10,000 for a coal company and \$15,000 for a gas well. The little city of Tonganoxie in this county even has \$2,500 on her account for prospecting for coal. West Plains township in Meade county shows a bond registry of \$15,000 for a sugar mill, the bonds running for 20 years at 6 per cent.

In nearly every case these mills and factories receiving artificial stimulus from the public funds proved a complete and dismal failure. It was simply a prostitution of the public money to uses which private capital in the hands of prudent, business-like investors avoided. But like a lottery, it proved seductive to the public, because there was one chance of winning, even if there were a hundred of losing. The little city of Anthony, Harper county, is a conspicuous example of a loser in this game of chance. She tried to force prosperity to bloom for her at once by mortgaging many years of her future. Like an individual who tries every get-rich-quick scheme that comes along, this little city lavishly voted aid to each promising enterprise that seemed likely to ensure her prosperity. But as was generally the case, this artificial stimulus failed to produce a healthful growth. Population decreased; assessed valuations fell off. The climax came in 1897, when, like Cimarron, the city was bankrupt and a humiliating compromise was granted by the state legislature.²³ Her tax levy for 1896 had reached the absurd limit of 13.4 per cent. of the total valuation. Of course this was more than could be paid. When the compromise was effected, and the debt-scaling commenced, the debt was \$168,187.75, while the total assessed value of all property in the city was only \$171,051. To collect this debt would, therefore, have required a clean sweep of the whole city.

The different steps in the insolvency of the city are easily seen in the table below:

²³ *Laws of 1897*, ch. 178.

DECLINE OF ANTHONY, KANSAS.²⁴

Year.	Population.	Assessed valuation.
1889	2,222	\$512,684 28
1890	2,021	473,167 32
1891	1,825	409,363 17
1892	2,003	355,490 67
1893	2,404	422,202 94
1894	1,686	252,421 31
1895	1,367	239,907 60
1896	1,074	171,051 00
1897	City insolvent, debt \$168,187 55.	

This was not Anthony's first experience of this kind, neither was she alone in her financial straits, by any means. In December, 1896, the commissioners of Lane county formally declared the county insolvent, and issued instructions to the county treasurer to refrain from further payment of interest on the bonded indebtedness. The funded debt was \$125,000, the population (11th census) only 2,055. This meant a burden of \$304 per family.

It is instructive to take a general survey of the municipal debt of this period, with its change from year to year. The amount of debt incurred annually and the total debt for each year were appallingly large, as will be seen by an examination of the statement below:

MUNICIPAL DEBT, 1885-1902.²⁵

Year.	Railroad bonds registered.	Refunding bonds registered.	Total bonds registered.	Total outstanding net debt.
1885-86	\$961,000	\$1,593,629	\$3,172,390	\$17,473,347
1887-88	8,544,551	2,378,750	13,338,062	30,733,935
1889-90	804,240	3,419,030	7,576,689	36,491,660
1891-92	315,000	1,154,240	3,271,831	37,075,740
1893-94	56,500	299,661	1,501,028	36,806,599
1895-96 .....	.....	712,900	1,719,677	34,604,246
1897-98	200,000	1,074,000	2,104,552	32,276,339
1899-1900	31,500	4,509,140	6,401,333	32,398,799
1901-02	59,000	2,395,602	2,724,100	32,614,909

Under refunding bonds, come all those originally issued for bridges, waterworks, schools, etc., but principally railroad bonds,

²⁴ *Commercial and Financial Chronicle*, (N. Y.) Feb. 20, 1897.

²⁵ Compiled from reports of Auditor and Board of R. R. Commissioners.

for these were far in the majority. The refunding column above shows an interesting tendency to postpone the payment of the debts well into the future instead of meeting them when due. Thus the last bond registry, that for 1901-02 shows that practically all the bonds issued during that biennium were refunding bonds. So in nearly every case above, the interest outlay is twice or three times the principal of the debt. While, therefore, the table shows a debt for 1902 of about \$32,000,000, the real outlay represented is at least \$64,000,000, or some \$40 per capita. The municipalities continue to make very free use of the refunding privilege.

Banking.—It has been necessary to say but little thus far on the subject of banking. This is because the state made no attempt to regulate the business of banking prior to the passage of the banking law of 1891.²⁰ This law was repealed six years later, and a more elaborate and comprehensive one enacted in its place. There are thus three periods in Kansas banking history, namely, the period of unregulated banking, 1861 to 1891; the period of loose state supervision under a bank commission, 1891 to 1897; and finally, the present system of strict state supervision under an improved bank commission dating from 1897. The title of the 1891 law was, "An act providing for the organization and regulation of banks, and prescribing penalties for violation of the provisions of this act." The more complete law of 1897 bears this title, "An act relating to banks and banking; providing for the organization, management, control, regulation and supervision of banks; and providing penalties for violations of the provisions of this act, and repealing chapter 43 of the laws of 1891."²¹

The principal feature of the 1891 law, and the one which survived in the 1897 law, was that providing for the appointment of a state bank commissioner. The law clothed this commissioner with certain powers and duties, among which were those of supervising all private and state banks in the commonwealth; of requiring at least four reports a year from each bank; and of taking charge of insolvent banks till receivers should be ap-

²⁰ *Laws of 1891*, ch. 43; 2 *Bienn. Report Bank Commissioner*, 1893-94.

²¹ *Genl. Stat.*, 1897, p. 187.

pointed. This commissioner or his deputy was to visit each bank in the state (except National banks) at least once a year and make a careful investigation. For this investigation the bank was to pay a fee fixed by law.²⁸ Other general provisions were that any five or more persons could organize a banking association; the capital stock should be at least \$5,000, and half paid up before beginning business; the amount of money on hand in available funds was to be 20 per cent. of deposits, one-half of which might consist of balances due from good, solvent banks, and one-half of cash on hand.

This law made no provision concerning the amount of real estate a bank could own and list as part of its paid up capital. The new law corrected this oversight. In it the provision is made that banks may hold and dispose of real estate acquired in the collection of debts, but no bank may hold real estate in excess of 50 per cent. of its capital. This ensures an element of fluidity in the bank's assets which the earlier law entirely overlooked. The banker in the small Kansas town is expected to be an investor in each new enterprise undertaken in his community, be it a street railway, gas or electric company, creamery, cheese factory, woolen mill, opera house, or what not. These investments usually prove business failures to the initial investors. To safeguard against such a use of bank funds, the 1897 law provides that no bank shall employ its moneys, directly or indirectly, in trade or commerce. This law also makes some changes in the legal reserves requirement. Banks in cities of less than 5,000 inhabitants must have available funds on hand to the amount of 20 per cent. of their total deposits, and in cities of over 5,000 population an amount equal to 25 per cent. of their entire deposits. But in the latter case, one-half the reserve may consist in balances due from other banks, and one-half in actual money. Full publicity of the bank's affairs is sought through a personal examination, and through the statement, made at irregular intervals, upon call, four times a year. This statement, submitted to the bank commissioner and also published in the local

²⁸ Fee for examination:

\$10 for bank with capital stock of \$5,000.

\$15 for bank with capital stock of \$5,000 to \$50,000.

\$20 for bank with capital stock of over \$50,000.

newspaper sets forth in detail under appropriate heads the resources and liabilities of the bank. This is similar to the report required of national banks by the comptroller. Two deputies are allowed the commissioner, under the 1897 law, and to meet the increased expense of the department, the fees for examination are increased.²⁹

Savings banks are also mentioned in this law, although they are new and comparatively unimportant in Kansas. Provision is made that any five or more persons may organize one, and the capital stock must not be less than \$50,000 nor more than \$500,000, 10 per cent. of which must be paid up when subscribed.

The early bank commissioners took the position that a general "house-cleaning" among the banks was needed, and they went at their work accordingly. The evils of overdrafts, excessive loans, heavy real estate investments, inadequate reserves, etc., were lopped off as far as was practicable. "The pruning process," says one commissioner, "the scaling down of assets, has been severe and occasionally a vigorous protest has been made."³⁰ During the panic of 1893, when the banks of New York resorted to payment in clearing house certificates, the commissioner took the position that such banks were not such as this law contemplated as depositories for the reserve of Kansas banks. Hence he issued an order to the effect that until the New York banks should again resume payment in lawful money, deposits therein in excess of 2 per cent. of the total deposits of the bank making the same would not be considered a part of their legal reserve. The order created considerable alarm and evoked much newspaper comment. Many people supposed Kansas banks were indebted to New York banks to a large amount. But this indebtedness proved to be only about \$150,000, while at the same time the Kansas banks had over \$500,000 on deposit in New York.³¹

²⁹ Fees under 1897 law:

Bank's capital \$15,000 or less, fee \$15.

Bank's capital \$15,000 to \$25,000, fee \$20.

Bank's capital \$25,000 to \$50,000, fee \$25.

Bank's capital \$50,000 to \$100,000, fee \$30.

Bank's capital \$100,000+, fee \$35.

³⁰ *Bien. Report, Bank Commissioner, 1898.*

³¹ *Bien. Report, Bank Commissioner, 1893-94.*

The item of overdrafts was cut down $62\frac{1}{2}$ per cent. in eighteen months after January, 1893. Bills payable and rediscounts were reduced 65 per cent. in the same time.

Some abuses crept in under the section of the 1897 law providing for the reorganization of banks as state banks. Several national banks, on the verge of ruin, reorganized under this provision, and failed soon afterwards. Their capital was greatly reduced under their reorganization, this reducing, *pari passu*, their stockholders' liability, while the banks' liability to their creditors remained unchanged. Thus when the fall came, the stockholders were ready to escape with a minimum of loss to themselves and a maximum of loss to their creditors.

Commissioners discourage private banks, on the ground that death of the owner forces a closing of the bank, and that the owner is likely to engage in various unsafe enterprises. As a result, these decrease in number, while state and national banks increase. The following table illustrates this change:

NUMBER OF BANKS IN KANSAS, 1896-1902.

	1896	1898	1900	1902
State banks.....	283	286	334	426
Private banks.....	109	82	55	38
National banks.....	116	101	111	146

The condition of the Kansas banks from 1891 to 1902 may be summarized from the commissioners' reports. A decrease in the number of banks, it will be seen, did not always mean a falling off in the total resources.

SUMMARY OF THE CONDITION OF KANSAS STATE AND PRIVATE BANKS, 1891-1902.

Date.	Number of banks.	Total resources.
1891, Oct. 13.....	414	\$30,257,961
1892, Sept. 1.....	447	34,637,146
1893, Oct. 3.....	420	28,306,786
1894, July 18.....	410	28,738,013
1895, July 11.....	408	27,934,977
1896, Sept. 1.....	392	25,691,882
1897, Oct. 5.....	383	31,555,466
1898, July 14.....	364	31,010,378
1899, Sept. 7.....	383	35,063,991
1900, Sept. 1.....	368	40,911,240
1901, Sept. 30.....	422	53,288,206
1902, Sept. 2.....	462	51,216,829

The panic of '93 and '94, together with the purging process of the commissioners, made the heavy reduction in the number of banks noticeable above. How much was due to each cause would be difficult to determine.

A peculiar feature now in vogue in the commissioners' reports is the "roll of honor," that is, a list of state and private banks that have an unimpaired surplus equal to or greater than 50 per cent. of their capital. The list is rapidly growing, whether it be the cause or effect of the "roll of honor." The 1902 roll comprised 21 per cent. of all state and private banks in the commonwealth.

The movement towards sound banking has been very pronounced since the passage of the 1897 law. Banks in general hold little else but clean assets, convertible into cash readily at the value at which they are carried on the books. The heaviest losses charged off in this movement have been bad paper (about a million and a half dollars since 1897), and depreciation in real estate (about half a million dollars).

All this has been accomplished without any expense to the state, since the fees of the banking department are more than sufficient for its maintenance.

Building and loan associations were not put under the supervision of the bank commissioner till 1899.³² At that time the need of such a step was well established. Many associations objected strenuously to the full publicity given their transactions by the new law, but the public was as much pleased as it was benefited. Under the provisions of this act, whenever the bank commissioner deemed a concern "unsafe and inexpedient" for carrying on further business, he promptly wound up its affairs. Under this heroic treatment, the number of "national" or foreign associations in the state rapidly diminished, while the number of sound locals increased. A full set of fees was applied to foreign associations, ranging from \$100 for application

³² *Laws of 1899*, ch. 78.

for admission to the state, to \$1 for affixing the commissioner's seal and certifying any paper.³³

The atmosphere of publicity given these associations has proved thoroughly salutary for the public concerned, and is doubtless indicative of the tendency towards greater publicity in other lines of industry.

Railroads.—This period in the state's history was one of unusually hard times for the railroads, due principally to the extravagant overstimulus given them in the preceding period. The roads had overbuilt. Mileage exceeded all normal business demands. A reaction set in early in the '90's. In 1896 but two roads out of twenty-six paid any dividends, while thirteen were in the hands of receivers. Many miles of road went out of use altogether, so that the total mileage was less in 1900 than in 1890, although the material resources of the state had made a considerable gain. The roads were a burden to their owners and to the taxpayers of the commonwealth who had voted them bonds. The total cash and land subsidies granted these roads up to 1902 amounted to \$43,700,000, whereas the taxes they had paid into the state and municipal treasuries amounted to only \$42,000,000.³⁴ Disappointment was pronounced throughout the state, especially in those communities that had paid dearly for the roads and had not realized the anticipated benefits. The decrease in mileage and the diminution in local aid are tabulated in the statement below:

³³ Fees for foreign building and loan associations:

Application for admission to state.....	\$100
Certificate of authority (or renewal which may be annual at option of bank commissioner).....	\$50
Filing semi-annual statement (assets under \$50,000), \$3; (assets \$50,000 to \$100,000) \$5; (assets \$100,000 to \$250,000) \$10; (\$250,000 to \$500,000) \$20; (\$500,000 to \$1,000,000) \$30; (\$1,000,000+) \$50.	

³⁴ Cash Subsidies=\$10,837,686.

Land (at \$3½ per acre)=\$32,880,670.

Taxes from auditor's reports, and estimated for early years=\$41,791,746.

RAILROAD MILEAGE, YEARLY INCREASE OR DECREASE, AND SUBSIDY.

Year.	Mileage main track.	Increase.	Decrease.	Subsidy, biennial periods.
1888	8,312	2100		
1889	8,721	409		
1890	8,763	43		\$804,250
1891	8,853	90		
1892	8,845		8	315,000
1893	8,840		5	
1894	8,832		8	56,500
1895	8,829		3	
1896	8,829	0	0	0
1897	8,802		27	
1898	8,759		43	260,000
1899	8,690		69	
1900	8,717	27		31,500
1901	8,710		7	
1902	8,754	44		59,000

The farmers of the state laid a large share of the blame for hard times on the railroads. They accused these carriers of unjust discrimination in rates against the Kansas shippers. "More state control" became the political cry of the populist party. They legislated accordingly, but found that the courts would not suffer an interference with interstate commerce. Governor Lewelling, speaking of the powers of the state railroad commission, and chafing under federal restraints on state action said, "Here then is the Scylla and Charybdis of legislative action: the inefficacy of too little power on the one hand, and the unconstitutionality of too much power on the other hand."³⁵ A way around this difficulty was sought in the closing days of the populist régime, when Governor Leedy called a special session of the legislature in December, 1898, a few days only before the time for the regular sessions. The law of 1883 creating the board of railroad commissioners was repealed, and in its place the legislature hastily created a "Court of Visitation" with certain judicial and administrative powers. But this court, so-called, was short-lived, for the law was almost immediately put to the test of the courts and there held unconstitutional. This left the state for a period of two years (April, 1899, to March, 1901.) without any board. A new board similar to the first, was created by the legislature of 1901.

³⁵ *Message of Gov. Lewelling, 1893.*

A movement in favor of a state railroad gained considerable headway at this time, culminating, however, only in talk. Governor Leedy in 1897, impatient at the decisions of the Supreme Court and the impotency of the interstate commerce commission, suggested in his message that Kansas, Nebraska, and Texas should build their own road to the Gulf. The idea was popular with many people, but the majority thought it too visionary or socialistic. The constitution prohibits the state from ever being a *party* in carrying on any works of internal improvement, but whether the state can do such a work, not as a party, but as a principal, is a different question.

What little municipal aid was granted to railroads at this time was chiefly under special laws. For example, in 1893, we find Haskell county authorized to vote aid to the amount of \$2,000 a mile within the county; while six townships in the same county are permitted to vote \$2,000 a mile; that is, \$4,000 a mile counting both grants.³⁶ The general limit set by the 1887 law, however, is \$2,000 a mile.³⁷ In 1895 a city is allowed to vote bonds to the extent of \$35,000, and has a special exemption from limitations of other acts.³⁸ Again this same year a township is authorized to vote \$4,000 a mile to a railroad.³⁹

And thus the general laws on the subject were made nugatory by special laws, as often as local interests dictated such a policy. While the constitution is silent on the limits of municipal indebtedness, it does expressly state that no special laws shall be passed. But this is a check which is inoperative.

The present system of assessment and taxation of railroads, Pullman cars, express companies, telegraph and telephone companies, will be considered in due order in the next chapter.

³⁶ *Laws of 1893*, chs. 44, 45.

³⁷ *Laws of 1887*, ch. 183.

³⁸ *Laws of 1895*, ch. 65.

³⁹ *Laws of 1895*, ch. 70.

CHAPTER VIII.

PRESENT FINANCIAL "SYSTEM"

There has been traced in the preceding pages the evolution of the present "system," or rather confusion, of tax regulations of the state. Attention has been directed to the gradual growth and extension of public expenditures, and also to the important features of state income. The financial history of the commonwealth has been wrought out under the popular pressure for "rigid economy." This has hampered the state in some of its spheres of work, such as public charities and higher education, but it has not prevented those smaller leaks that constantly sap the public revenues. Although the state has, in some lines, been forced into practices of parsimony, yet the municipalities have been free to spend their public funds with a lavish hand. Constitutional requirements have been a second force in shaping the state's financial affairs. These requirements have set limits to the extraordinary expenditures of the state, and have made necessary a certain so-called "uniformity" in matters of raising revenue. It now remains to examine with some particularity the significant features of the state's financial life of today; that is, the matters of expenditure, income, and general fiscal administration.

Outlay.—The outlay of the state determines its income, for the income is never adjusted till the amount of expenditure is determined upon. Hence primary importance attaches to the outlay which the state makes from year to year. The nature of these expenditures shows exactly what functions the state is exercising, and a study of these functions is a very fruitful one. But it will not be necessary at this point to go into such an investigation, after what has been given. A few general com-

ments must suffice. It has already been recorded how, at the very outset, the state performed only those essential duties making for internal and external security. This was done through the machinery of the state government (administrative officers such as governor, treasurer, auditor, secretary of state, attorney, adjutant, superintendent of public instruction, and others), the state legislature, and the state judiciary. This included expenditures both for educational and penal institutions. Works of benevolence and charity were taken up immediately afterwards. From this beginning there is noticeable a general expansion of state activities, calculated to promote the economic, physical and intellectual interests of the people. This growth is manifest in the creation of state agricultural and horticultural societies; fish commissions; silk commissions; live stock sanitary commissions; insurance department; bank commissioner; grain and oil inspectors, etc., and in the granting of relief to frontier settlers, the creation of a board of health, labor bureau, etc., and finally in the support of an historical society; academy of sciences; traveling libraries, etc. Special needs have called forth the creation of temporary commissions, such as the beef combine commission of 1889, the tax commission of 1901, etc.

The present outlay of the state follows many channels. The table given below clearly shows the actual expenditures for 1901 and 1902, and the objects of the outlay.

STATE OUTLAY, 1901 AND 1902

Object.	1901.	1902.
State government (administrative)	\$115,713	\$122,232
Judiciary	158,003	159,806
Legislature	89,588	(No session.)
Higher education	308,608	383,308
Penitentiary	234,947	300,195
Public charities	889,585	825,716
Private charities	18,000	15,700
Literary and scientific objects	8,416	20,151
Pensions	600	600
State printing	127,500	71,900
Capitol and state property	112,969	131,681
Boards, supervising general health and industry of state	65,899	80,248
Destruction of prairie dogs .....	.....	1,974
Quantrell raid claims .....	.....	78,729
Sugar beet bounty .....	.....	15,153
Miscellaneous	101,425	9,599
Totals	\$2,227,855	2,258,594

But along with this outlay of the state there should be considered the expenditures of the local divisions, in order to see clearly how the public funds are employed. This will show, not only the cost of government, but also the specific objects for which this money is expended.

By returns made to the state auditor from the municipalities, it is easy to determine the rates of state and local taxes for any given year. By taking a large number of years and averaging returns, a fairly accurate statement is obtained of the different kinds of taxes paid by the people. Such an average made from a series of years gives the following interesting statement of per cents:

TOTAL STATE AND LOCAL TAXES

State purposes	12.7 per cent.
County purposes	31.3 per cent.
City purposes	13.1 per cent.
Township purposes	10.6 per cent.
School purposes	32.3 per cent.
100 per cent.	

This brings to light some interesting facts. The most striking is the heavy outlay for education. Whereas it is shown in the table of state outlay above that the state annually expends about three times as much for penal and charitable work as for higher education, yet, when the local divisions are considered, as they should be, the fact is apparent that for educational purposes alone these spend annually about three times as much as the entire state outlay, for all purposes whatsoever. This applies to all moneys which are raised through the channels of taxation. But it is also true if we include state income from fees, etc., for these are more than offset by the income of the permanent school fund.

The objects of county outlay do not appear in the table. They are chiefly the county administrative government, the judiciary, county buildings, such as court house and jail, and county bridges and poor farms. City governments in Kansas play a much less important part than the county governments, since the cities of the state are all small. The chief outlay here is, in general, for the administration of the city government, the judi-

ciary and police, city halls and jails, and in many instances, for the public utilities, water and light. Special improvements such as paving, sewerage, etc., constitute irregular expenditures, and are met by special assessment.

The township outlay is the least of all, since this local division has very few and simple functions. The chief objects of outlay here are roads, bridges, and a few administrative officers.

These findings give a picture of an average, or rather a *composite* citizen, who happens to pay exactly \$100 a year in taxes, and for the following purposes, in the order of their importance:

For schools	\$32 30
For county purposes.....	81 80
For city purposes.....	18 10
For state purposes.....	12 70
For township purposes.....	10 60
All purposes	\$100 00

This shows the true relations between the kinds of taxes paid. Another basis is necessary to show actual amounts of taxes paid. The average annual tax in Kansas for all purposes is now \$14,700,000, or \$10 per capita, or 4.2 per cent. of assessed valuation.¹

Therefore, the actual taxes paid for each individual in the state, and the purposes of these taxes, are the following:

For schools	\$8 28
For county purposes.....	8 18
For city purposes.....	1 81
For state purposes.....	1 27
For township purposes.....	1 08
All purposes	\$10 00

Considering this tax levy as a true index of the outlay in each case, a method correct for Kansas, the relative importance is shown of each division of government, from the state down.

A comparison of municipal, state and federal debt is shown in Appendix E.

¹ Compare with United States:

	1901	1902	1903
Total expenditures.....	\$621,598,546	\$598,088,903	\$640,828,450
Per capita expenditures....	\$8 01	\$7 51	\$7 97
Total receipts.....	\$699,816,581	\$684,826,280	\$694,621,118
Per capita receipts.....	\$9 01	\$8 66	\$8 64

The matter of small leaks in the state outlay was mentioned as something overlooked in the popular clamor for rigid economy. These drains, small in detail, aggregate in a few years thousands of dollars of absolute waste. They come principally from that pernicious incubus of our political system whereby successful candidates are supposed to distribute patronage to their "friends." A small brood thus batten at the public crib from year to year. An example of this may be cited. Transcribing the journals of the House and Senate and filing a manuscript copy of the same was a budget item for several years, representing an outlay of from \$1,000 to \$3,000 per session for the annual sessions then held. Later this duty was performed equally well by officers already appointed—the chief clerk of the House, and the secretary of the Senate—at a total outlay of \$800, thus saving the state about \$1,000 a year. In 1884 this transcribing cost but \$250.

At the present time duties and services are multiplied to an absurd extent, and many cases as unsavory as the above are familiar to all who take the care to observe.

The state has made outlays of money from the beginning which partake more of the nature of investments than mere expenditures. These are for the erection and repair of public buildings. The total cost of these to the state is shown in the table below:

COST OF STATE BUILDINGS, 1861-1902

Penitentiary	\$1,400,292
Capitol	3,044,853
Reformatory institutions ²	557,194
Higher educational institutions ³	898,912
State charitable institutions ⁴	800,483

These figures include money spent for permanent repairs, as well as original cost of erection. In cases of bond issues—as with

² Boys' Reform School, Topeka.

Girls' Industrial School, Beloit.

Hutchinson Reformatory [Boys], Hutchinson.

³ State University, Lawrence.

Normal School, Emporia.

Agricultural College, Manhattan.

⁴ Insane Asylums, Topeka, Osawatimie, Parsons.

Deaf and Dumb Asylum, Olathe.

Blind School, Kansas City.

Imbecile Asylum, Winfield.

the capitol and the penitentiary—the interest on these bonds, and the discount as well, are included in the cost account, for these represent actual outlay to the state. The interest on the \$320,000 of capitol bonds, for instance, was \$672,000. Cost of maintenance from year to year is not included. The present value of this state property is shown in Appendix I.

Another interesting group of state expenditures is presented in the following table:

MISCELLANEOUS OUTLAY, 1861-1902

State printing	\$2,232,804 04
Subsidies to private industries (beet sugar).....	99,936 50
Subsidies to private charities.....	154,425 00
County destitute insane.....	729,811 00

The state early adopted the county asylum system for the care of all ordinary cases of pauperism. As overseers of the poor, the mayor and council in incorporated cities, and the trustees of the civil townships have certain wide powers in granting outside relief. The larger counties are now employing a commissioner of the poor for the old, loose system seemed to promote pauperism, rather than cure it. The tendency under the system is to limit relief almost wholly to those who are actual inmates of the county poor houses in rural communities, and to those in cities who perform some work test. The only outside relief granted regularly by the state is that made for the county destitute insane for whom there is no room in the state institutions. This varies from a few thousand dollars to a hundred thousand dollars a year, as the legislature may see fit. This outlay, however, is expected to disappear from the budget with the increase in the capacity of the state institutions.

A comparison of state outlay for charities with the county outlay shows the following interesting figures:

STATE AND LOCAL CHARITIES.⁵

STATE CHARITABLE INSTITUTIONS.	
maintenance for year ending June, 1899.....	\$462,840 49
per capita cost	.324
COUNTY CHARITIES.	
outlay on asylum farms.....	\$135,978 40
outside relief	209,152 67
per capita cost	.242
Total per capita cost	\$.566

⁵ 15 Bureau of Labor, 1899, pt. vi.

Hence it is evident that the burden is about equal for state and local charities. The state outlay, however, is a matter of public interest and public scrutiny, and therefore follows some scientific and accredited principles, whereas the local outlay is in accordance with no principle. Not infrequently it does as much harm as good by nursing dependence and pauperism.

Income.—An examination of state income will now be made, with special reference to the source of that income. The general property tax is, of course, the principal source. To this it is necessary to give attention in detail in a later paragraph. The other sources of income now employed by the state are fees, interest on permanent funds, state industries and gifts.

The fee system is very extensive, especially in the smaller local divisions. In certain offices, where the service is light and only occasional, fees are used. As the constancy and regularity of the work increase, the salary increases and fees, as a rule disappear. These fees are regulated by law and vary according to the nature of the service.

The General Statutes of 1901 shows a list of fees of the following classes and kinds: bank examiner; supreme court clerk; marshal; stenographer; corporation charter; foreign building and loan associations; examination in dentistry; public stock yards; sanitary commission; assistants and clerks of secretary of state; sealers of weights and measures; superintendent of insurance; inspector of oils; inspector of grains; game warden. These are all state fees. The list of fee payments might be extended to include those in connection with city courts, assignment proceedings, etc. The list for the other local divisions includes fees paid for services of treasurers, clerks, sheriffs, attorneys, registrars of deeds, jurors, witnesses, coroners, notaries public, justices of the peace, probate judges, surveyors, commissioners, arbitrators and umpires, superintendents of bridges, appraisers, and fence viewers.

The fees of chief fiscal importance to the state are those of the bank commissioner and the superintendent of insurance, for in these two cases the fees are more than adequate for the support of the departments. This is one step, at least, in the di-

rection of a complete segregation of the sources of local and state revenue. Its wisdom and success will doubtless lead to further advance in the same direction.

The interest income of the state comes from the permanent school funds, and must be applied without fail to the annual expenses of the different schools. These funds aggregate about \$7,000,000 and are invested for the most part at 7 per cent. in school district bonds. They therefore yield the state about half a million dollars a year. This is chiefly for the benefit of the common schools, as the institutions of higher education depend on legislative appropriations for support. In 1900 these funds were invested, or uninvested, as follows:

Permanent school fund, invested.....	\$6,648,297 44
Permanent school fund, uninvested.....	68,650 24
University permanent fund, invested.....	148,260 82
University permanent fund, uninvested.....	969 17
Normal school permanent fund, invested.....	200,919 01
Normal school permanent fund, uninvested.....	8,725 05

These funds, however, contribute but a small part of the money necessary for the maintenance of the state school system. Even in the case of the common schools, where the permanent fund is almost \$7,000,000, about seven-eighths of the support comes from taxation, (See Appendix B.).

Of the state industries, little need be said here. They are not intended as a source of income to the state, but were created for other purposes. A few small and fiscally unimportant industries are conducted at the state charitable and reformatory institutions. The state prison with its thousand convicts is the seat of the most important industrial work of the commonwealth. Coal is mined in a state mine by the prisoners, and furnished to the different state institutions, to meet all their needs. They give a paper credit of \$2 a ton, merely to facilitate proper account keeping. This means a great annual savings to the state. A brick plant is also operated here, likewise to supply public institutions. Seventy-five to eighty prisoners are employed in the operation of the binder twine plant installed a few years ago. The output of this plant is sold and the cash turned into the state treasury. In this industry there is no competition with the free labor of the state, and a ready market

is always close at hand. The labor is beneficial to the prisoners and a source of profit to the state. The prison is practically self-supporting, outside of special appropriations for new buildings, etc.

These incomes described above are all in the nature of regular incomes. There are also certain irregular incomes which must be mentioned. First, and most important, is the matter of loans, made to meet the exigencies of the times. The importance of this has been illustrated in the foregoing pages of this history. As the state wealth increases, however, less and less reliance is placed on this extraordinary source of income, and more expenditures are provided for by the regular, annual income.

A little over 100,000 acres of public school lands yet remain unsold, and the proceeds of this will go to augment the school fund. The federal government still holds about 1,000,000 acres of land in the state, and as this is sold to settlers, 5 per cent. of the proceeds will be added to the permanent school fund. These two streams of revenue will in the end increase this fund by some \$500,000, and since, by law, this fund can never be diminished, its future of usefulness is to be a very long one.

A final source of income to the state is that of gifts. These are chiefly in the nature of donations of buildings to her educational institutions, such as the Spooner Library and the Fowler Shops to the State University, or of scientific gifts to the state at large. In this class are the Goss Ornithological Collection, now kept at the State Capitol, and the Stormont Medical Library. The "conscience fund" must complete this list, unimportant fiscally, but very interesting as a commentary on human nature. In 1900 the sum of \$24.83 was returned to the state under this head.

To appreciate the importance of these different sources of revenue, it is necessary to examine concrete cases. There is therefore presented below a full table of receipts for the years 1901 and 1902, showing both the source and amount:

RECEIPTS, 1901 AND 1902

Source.	1901.	1902.
Direct taxes.....	\$1,815,789	\$1,914,556
Fees.....		
Oil inspector.....	19,964	19,550
Auditor.....	1,654	1,469
Secretary of state.....	9,133	12,896
Courts.....	11,258	14,133
Bank commissioner.....	8,351	8,689
Grain inspector.....	38,408	34,206
Medical examinations.....		12,521
Stenographers.....	2,061	2,715
Live stock sanitary commission..	2,622	4,260
Superintendent of insurance.....	31,807	47,041
United States government.....	35,085	42,382
Penitentiary and other institutions.....	29,258	106,515
Accretions to annual and per. school funds through sales, rents, interest, balances, etc.....	644,409	630,108
Balance in treasury.....	510,711	577,626
Miscellaneous, funds, etc.....	1,044,132	729,340
Totals.....	\$4,204,657	\$4,158,007

The last three items in the receipts above, it should be borne in mind, are of the nature of balances, principally, in the various funds, and when subtracted from the total income leave some \$2,000,000 as the real annual income of the state. This amount, the table clearly shows, comes almost entirely from direct taxes. And hence it is true, as already assumed, that the income from direct taxes is a fair index of outlay for the various objects of public support, such as schools, municipal and state government, etc.

Municipalities employ certain sources of revenue in addition to those used by the state, and discussed above. Chief among these is the license or occupation tax, similar to those in vogue in southern cities. Newton, for instance, a city of the second class, in 1882 levied a business license on more than twenty kinds of business, ranging from \$40 a day on circuses and menageries, to \$5 a year on merchants with a stock of goods not exceeding \$1,000 worth. This city ordinance stood the test of the Kansas Supreme Court.⁶ The constitutional provision of uniformity applies only to taxes, not to licenses, privilege fees, or franchise fees.

The road tax of \$3 is a local tax which seems to yield a minimum of good, from whatever point considered. Able-bodied

⁶ 29 *Kans.*, 364.

men, from twenty-one to forty-five years old, pay this tax, either in money, or labor at \$1.50 per day. Three dollars a day is allowed for a man and team. As a reminder of civic duties, this tax is a success, but as an experiment in road building it is a pronounced failure.

For paving the streets and other special work of this kind in cities, a special assessment is made on the property benefited by the improvement. In a growing city these assessments frequently prove very onerous to those who happen to be owners of abutting property where the improvement is located.

The poll tax still figures in the Kansas financial system, but is playing a constantly decreasing part. Cities of the second and third classes are authorized to use it, but rarely resort to it. A law in 1899 authorized townships in sparsely settled counties to maintain fire-guards to prevent the spread of prairie fires, and to have the poll tax paid by work on these guards.

Taxation.—We are now ready to examine the main features of taxation, for this, as we have seen, is first and foremost in importance as a source of revenue. To give the discussion a logical sequence, consideration will first be had of the assessment of property, and then the levy and collection of taxes, and finally some observations will be made on the merits of the system.

Property is grouped in two general classes, real and personal, and the aim of assessment is to assess all real and personal property in the state once, unless it is expressly exempt. The statute defines real property as "the land itself * * * and all buildings, fixtures, improvements, mines, minerals, quarries, mineral springs and wells, rights and privileges appertaining thereto." The term personal property, according to the law "shall include every tangible thing which is the subject of ownership, not forming part and parcel of real property; also all tax sale certificates, judgments, notes, bonds and mortgages, and all evidences of debt secured by lien on real estate; also the capital stock, undivided profits, and all other assets of every company, incorporated or unincorporated, and every share or interest in such stock, profits, or assets by whatever name the same may be designated."

The constitution provides for certain classes of exemptions, and these are elaborated somewhat in the statutes. The list changes from decade to decade, constantly growing larger, as new kinds of property claim the right of exemption. It was originally intended for property of a purely public or social nature, and for the small amount of \$200 of personalty for each family. This last provision looks innocent enough and incapable of abuse, but such is not the case. Assessors juggle with it. Some families divide ownership of their property in such a way that this exemption is made to apply three or four times in a single family. Its commonest abuse is in subtracting it from the completed assessment which is made on a basis of one-fourth or one-fifth real values. This swells the \$200 exemption to \$800 or \$1,000, whereas it should have been subtracted from actual values, before assessment is completed.

The other exemptions now provided by law are as follows:⁷

(1) All school houses and church buildings, with the land owned by each, up to ten acres, provided it is not leased or used for profit, and also the parsonage of any church with its land up to one-half acre.

(2) Graveyards.

(3) All buildings and equipment of scientific, literary and benevolent associations, used exclusively for scientific, literary and benevolent purposes, together with the lands occupied by each, up to five acres, if not leased or used for profit.

(4) All moneys and credits belonging exclusively to universities, colleges, academies, or public schools of any kind, or to religious, literary, scientific or benevolent and charitable institutions, not exceeding in amounts the charter provisions in each case.

(5) All property of the state or of the United States.

(6) All property belonging to any county, city, town, or school district, except land bid off for counties at tax sales.

(7) The wearing apparel of every person.

(8) All public libraries.

(9) Family libraries and school books of every person and family, not exceeding in any one case the value of \$50.

⁷ *Gen'l. Statutes*, 1901, ch. 107.

(10) All memorial halls owned by the Grand Army of the Republic, and land in each case up to one-half acre.

These constitute all the positive exemptions at present contemplated by the statute. For the benefit of debtors who are fortunate enough to be creditors at the same time, provision is made that debts owing in good faith may be deducted from gross amount of credits due. Every person is supposed to list all money in his possession, and all credits due or to become due him.

These are the general rules of assessment, and the machinery for carrying them out is very simple. It is the local assessors. In cities of the first and second class, the mayor and council appoint the assessors annually; in the county the township trustee is the local assessor, elected yearly.

But for the government of this assessment machinery, the regulations are intricate and complex. In other words, the attempt is made to assess all property uniformly and equitably, and the attempt fails. The law declares in plain terms that these men shall assess all property at its true value in money. They are bound by an oath to do this, and the property owner likewise may be required by the assessor to verify his returns with an oath. The law is plain on this point, 100 per cent. is the true basis of valuation contemplated. Another provision is made, which on its face, looks like a very wise one. Before the assessors begin their work in the spring, they are to meet together at the county seat and there agree upon an "equal basis of valuation." In other words, they are to decide what 100 per cent. of the actual value is, when applied to a horse, a cow, a wagon, an acre of land, etc. But this law is flagrantly violated year after year. No better evidence of this is needed than the official minutes of these annual assessors' meetings. A few cases are cited here from the 1897 reports, for illustrations:^a

^a 18 *Bureau of Labor*, 1897, p. 14.

**BASIS OF ASSESSMENT OF REAL AND PERSONAL PROPERTY FOR 1897, AS
AGREED UPON OFFICIALLY BY TOWNSHIP AND CITY ASSESSORS.**

County.	Realty.	Personality.
	Per cent.	Per cent.
Atchison.....	25	25
Chase.....	50	33½
Cherokee.....	33½	50
Decatur.....	100	100
Gove.....	200	33½
McPherson.....	40	40
Rawlins.....	100	100
Republic.....	20	33½
Sedgwick.....	30	30
Wabaunsee.....	20	33½
Woodson.....	50	50

An investigator, reporting this method of assessment to the Bureau of Labor, speaks of it in these terms.⁹ "Most astounding is it to read the official minutes of the meetings of county boards of assessors in the spring of 1898. In advance of assessment these boards met together to decide whether they would follow the whole state law, which expressly commands the assessment of all property at its full cash value, or whether they would obey one-third the law, that is, assess property at one-third of its value; or whether they would only obey one-fifth of the law. The writer attended the meeting of one board, where assessors openly stated that they would not pledge themselves to assess at any fixed ratio, as they knew that some of the assessors present would assess it a less ratio than that which was adopted, whatever that might be. Harmony was finally attained by the passage of a resolution to assess at the usual ratio, and a general laugh followed the inquiry by one innocent member as to what that ratio was. No one seemed able to answer."

The minutes of Cherokee county are equally interesting.¹⁰ They read: "On motion, it was agreed to assess all property at its actual value, but after much discussion the motion was reconsidered, and the following substitute chosen:

"Resolved, That it is the sense of this body that in future years all property should be assessed at its actual cash value.

"On motion it was agreed to assess all personal property *
* * at 50 per cent. of its actual value.

⁹ 13 *Bureau of Labor*, p. 76.

¹⁰ 13 *Bureau of Labor*, p. 58.

"On motion it was agreed to assess all real estate at one-third its actual value."

It must be conceded that these assessors were at least capable of giving good advice for the future, even if they did not follow it themselves.

Thus from county to county the agreed basis of valuation fluctuates. To illustrate the nature of the statement or list of property commonly dealt with by the assessors, and to give another concrete example of astonishing valuations, the schedule of Dickinson county for 1898 is presented.¹¹

"Horses, 6 months old, and under 1 year.....	\$5 to	\$10
Horses, 1 year old, and under 2 years.....	\$5 to	\$15
Horses, 2 years old, and under 3 years.....	\$10 to	\$25
Horses, 3 years old, and over 3 years.....	\$5 to	\$40
Mules and asses, 6 months old and over, same as horses.		
Stallions for service, 12 times fee.		
Jacks for service, same as horses.		
Neat cattle, 6 months old and under 1 year.....	\$8 to	\$12
Neat cattle, 1 year old and under 2 years.....	\$12 to	\$20
Neat cattle, 2 years old and under 3 years.....	\$15 to	\$25
Neat cattle, 3 years old and over.....	\$15 to	\$40
Fat cattle, per pound.....	3½ to	4 cts.
Sheep, 6 months old and over.....		\$2.50
Hogs, per cwt.....		\$2.50
Farm implements, threshing machines, engines, horsepowers, wagons and pleasure carriages, gold and silver and other watches, at judgment of assessor.		
Pianofortes	\$50 to	\$150
Other musical instruments at judgment of assessor.		
Wheat, per bushel.....	40 to	60 cts.
Corn, per bushel		12 cents
Rye, per bushel.....		20 cents.
Oats, per bushel		12 cents.
Kaffir corn, per bushel.....		12 cents.
Sorghum, per bushel		15 cents.
All other items, judgment of assessor.		

"On motion it was voted to deduct the constitutional exemption (\$200) from full value on personal property, and divide the remainder by 3.

"On motion, real estate to be assessed at one-fourth its actual value."

These minutes suggest in a very forcible manner what sort of uniformity of assessment is reached throughout the state. This is certainly a queer way of reaching the "uniform and equal rate of assessment and taxation" contemplated by the constitution.

¹¹ 13 Bureau of Labor, p. 60.

Speaking of these minutes given above, and others of like tenor, a citizen of Kansas very tersely said; "Summed up, a system that will permit a cow to cross an imaginary line and double or treble her value, or that will allow a bushel of wheat, if it happens to be in the next county on the first day of March, to shrink in value one-half, one-fourth, or have no value at all, and treats all other property in the same way, or that encourages the use of the exemption laws as shown above, should be immediately remedied or abolished, or failing to do either, the age limit for 'mules and asses' as enumerated in the above schedules, should be extended to include the citizen and voter, and count us all in where we belong."¹²

Enough has been said to indicate the true character of the work undertaken by the assessors, and to show that they adjourn from their preliminary meeting with the deliberate intention of disregarding the first law enacted for their guidance. There are various other regulations, better obeyed, which give them a working program. Some of these laws will now be examined, together with the result of their operation. The general statute now has separate and distinct provisions for real estate, personal property, railways, banks and bankers, merchants and manufacturers, and telegraph and telephone companies. For our present purpose it is best to examine briefly the assessment of the first two general classes,—realty and personalty,—and then the separate classes differentiated from these.

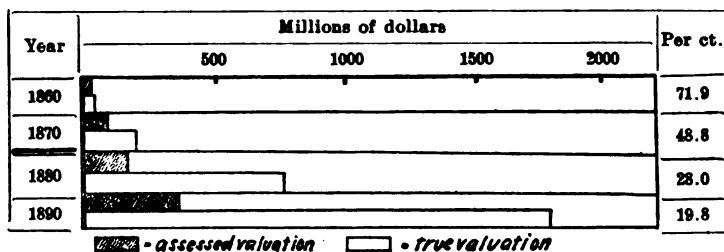
The listing and valuation of real estate falls to the assessor, fortunately, but once in two years, and not annually as is the case with personal property. He is to view the land in question, examine the improvements, and lump all together. Returns are to be made in full to the county clerks by May 10. A strong oath is provided for the assessor as a final goad to honesty. Iron-clad oaths are also provided in the case of personal property to ensure the accuracy of the annual returns.

The great crying evil of assessment as applied today is its

¹² 13 *Bureau of Labor*, pt. 1.

inequality. Under-assessment is of course the rule. But this rule does not work uniformly, and hence inequalities do not tend to become leveled down. Flagrant violations of uniformity appear as between individuals, between localities, and between classes of property. The general omnipresent evil of under-assessment is graphically represented in the diagram below:

PLATE I.—RELATION OF ASSESSED VALUATION TO TRUE VALUATION,
1860-1890



True valuations are taken from the United States census reports, and the assessed valuations are those returned by county clerks to the state auditor.

Since more and more property escapes assessment and taxation as shown above,—28.1 per cent. in 1860, 80.7 per cent. in 1890,—the question presents itself, what class of property is it that escapes? The answer is, the larger the property, the smaller is its rate of assessment. The truth of this statement is illustrated in the authentic table below:

ASSESSMENT RATES ON SMALL PROPERTIES, LARGE PROPERTIES, AND OTHER CLASSES OF PROPERTY.¹³

100 per cent. Rate required by law on all property.

100		
90		
80		
70		
60		
56	56	Farms worth \$500 and under.
50		
41	41	Farms worth \$500 to \$1,000.
40		
30		
25	25	Farms worth \$5,000.
20		
17	17	Farms worth \$10,000.
10	10	Goods and chattels.
6	6	Packing houses.
2	2	Money.

1 per cent.

.9	.9	Mortgages, notes and bonds.
0	0	Debts and accounts.

0 per cent.

¹³ The sources of this table make it of peculiar value. It is based (a) on actual sales of real estate; 1,648 sales in 30 counties (13 *Bureau of Labor*, pt. I,

When once the assessor has broken away from the law regulating his conduct and requiring the 100-per cent. basis of valuation, he has no longer any guiding principles, except such considerations as come up in each individual case of assessment. A small holding he accordingly assesses at something like its real value; but in the case of a large holding, he is willing to knock off a few thousands, since this still leaves a large sum. But should he reduce the value of a small holding even a few hundred, there would be nothing left. Then there is another factor of some importance, namely, the prestige and general influence of the person with the large holding. He is more likely to be favored with a lenient assessment, than is his humble neighbor. These things partly explain the great disparities seen in the table above.

Inequalities between persons in the same county are overwhelmingly numerous. Only a few instances will be given here, but they could be multiplied almost without limit. In Saline county two 160-acre farms were sold, one for \$5,000, the other for \$1,000. The assessment on them the same year was, respectively, \$600 and \$500. In Cowley county, the same year, one farm sold for \$800, another for \$2,400. Both were assessed at \$200.¹⁴ In these cases, *bona fide* sales were made, a fact which strongly emphasizes this evil of inequality between individuals. We may add two cases from Douglas county, where the true value was set by appraisers of probated estate. In case number one, household goods were appraised at \$128, but assessed at \$215, or 168 per cent. of true value. In case number two, goods and chattels were appraised at \$56,000, but assessed at \$275, that is, one-half of one per cent. of true value.¹⁵ These cases are typical and must stand for that wide and general class of individual inequalities which is one curse of the present assessment system.

1897); and (b) on probated estates as follows: Goods and chattels, 247 estates in 9 counties; notes and mortgages, 115 estates in 7 counties; debts and accounts, 34 estates in 4 counties; money, 134 estates in 8 counties; (14 *Bureau of Labor*, p. 8, ff.); (c) packing house returns of capital invested, as reported in 13 *Bureau of Labor*, pt. I.

¹⁴ 9 *Bureau of Labor*, p. 718.

¹⁵ 14 *Bureau of Labor*, p. 30.

A third class of inequalities is that between different localities. The preparation of the assessors at their preliminary county meeting where the "basis of valuation" is settled, makes this follow as a necessary result. Evils here are most prevalent of all, but only a few typical cases can be cited at this point. In the year 1901, for example, horses were assessed as low as \$1 in one county, and as high as \$150 in another. The minimum assessment of cattle varied from \$1 to \$15; gold watches from \$1 to \$100; pianos from \$5 to \$500. Other personal property was assessed in most counties at one-third its real value; in McPherson county at 20 per cent.; in Reno, adjoining this county, at 100 per cent., and in other counties "at the discretion of the assessor."¹⁶ In some counties grain in store was not assessed at all, but was entirely ignored by the township assessors. In many counties household furniture of all kinds,—plate, jewelry, musical instruments, etc.,—was lumped at from \$20 to \$50 per family, regardless of the amount or quality of the same.

So on the whole, therefore, there seems no room for even a hope of justice as between different localities.

There are yet other evils inherent in the system. The charge of double taxation is one of the commonest. It comes in many forms. To the farmer it is a concrete evil. Farmer A, for instance, owns a cow worth \$50, on which he pays taxes. Next year Farmer B buys this cow at a public sale, giving in exchange his note at one year for \$50. There is still the one piece of productive property—the cow—worth \$50, but if the assessor does his duty, he finds and lists \$100 worth of property, that is, A \$50 on the note and B \$50 on the cow. Where he found \$50 the year before, he now finds \$100. The temptation to violate the law here is very strong, too strong, in fact, for the average citizen. But the table given on a preceding page shows that nine-tenths of one per cent. of notes are taxed; that is, nine out of a thousand.

Assessment of mortgages is open to the same objection among holders of encumbered estates. Two men seem to be taxed on the same piece of property when both land and mortgage are taxed at their full value. The situs of the mortgage is declared

¹⁶ *Report of Kans. State Tax Comm.*, 1901, p. 10.

to be the owner's residence.¹⁷ Should he happen to hold a mortgage on land in some state like California, considering the mortgage a part interest in the real estate, he would be taxed twice on the mortgage, according to law. But, as a matter of fact, mortgages, as well as notes, practically exempt themselves from taxation entirely. They produce no revenue to the state or municipalities, but their continuance on the taxable list of the statutes doubtless serves to maintain their interest rates at a somewhat higher level than the normal.

With money, about the same thing is true at present. The assessor is supposed to find it all. But on the first day of March, 1901, when the bank deposits, alone, aside from all moneys outside, amounted to over \$70,000,000, the Kansas assessors were only able to find \$3,059,424.¹⁸

These evils of under-listing and non-listing cannot be entirely grouped under the old-fashioned sin of dishonesty. There is an element of self-defence in it. Each knows the prevailing custom, and must defend himself accordingly. Love of fair play, it is highly possible, would ensure a cheerful listing of all the property of an individual, did he feel any assurance that his neighbors too were being assessed at full values.

Assessment of the coal mines of the state follows the caprice of the local assessors, but is usually at a small fraction of the capital actually invested.

The assessor's directions for assessing merchants and manufacturers are very meager. He simply takes their statement of the average value of stock on hand during the year. Banks and bankers are reached by assessing the capital stock and surplus at the bank, regardless of where stockholders may live.

For the assessment of corporations a few special regulations have been differentiated from the general mass of tax laws. Railroads, sleeping car companies, telegraph and telephone companies, have now been taken out of the hands of local assessors, and given to state boards. Express companies are still subject to the crude, primitive method of local assessment.

The assessment of railroads is made annually by the state

¹⁷ 5 Kan. A., 90.

¹⁸ Report of Kans. State Tax Comm., 1901, p. 10.

board of five men,—lieutenant-governor, secretary of state, treasurer, auditor, and attorney-general. Real estate not connected with the track, however, is assessed locally, the same as other real estate. But that which constitutes the right-of-way, depot grounds, etc., comes within the purview of the state board. In making the annual assessment of railroads, this board proceeds with two things in view, namely, the value of the fixed plant, and the value of the rolling stock, both of which are considered as personal property.¹⁹ The guiding principle seems to be the cost of construction, checked up against the cost of reproduction. Minutes of the state board bear out this idea. No serious effort is made to reach the franchise value, although the impression is growing that this can be no longer neglected with indifference. It is interesting to follow a case of assessment by this board. According to law, the board meets on the third Monday in April, and has before it for consideration the sworn statements sent in by the railroads of the state. The law provides that this statement shall set forth;

(1) the statistics of right-of-way, track and road-bed, length of main track in Kansas and its total length, its proportion in each city, township, and county.

(2) length, location, etc., of side tracks.

(3) complete list of location, value, etc., of depots, station-houses, water stations and all other buildings.

(4) number of ties in track per mile; weight of iron or steel rails per yard used in main or side tracks; what joints or chairs are used in track; the ballasting of road, whether with gravel or dirt; the length of time iron has been used, and length of time road has been built.

(5) full value of rolling stock. This list shall distinctly set forth the number, class and value of all locomotives, passenger cars, sleeping cars, dining cars, wrecking cars, pay cars, and all other kinds of cars owned or leased by said company.

(6) (a) The amount of capital stock authorized and number of shares into which such stock is divided; (b) amount of capital stock paid up; (c) market value of such stock. If no market value, then actual value.

¹⁹ 9 Kan. A., 545.

(7) A detailed inventory of all tools, repair materials, and all other personal property.

These are the facts in the order which the law states, and these constitute the working data of the board. The only expert testimony heard by the board is that of the attorneys and tax agents of the roads who appear and seek reduction in their valuations.

The board after more or less deliberation fixes upon the value of the rolling stock. In the minutes of one meeting, for instance, it is said that by "personal inspection" they arrived at the following valuations:²⁰ locomotives, cost new \$7,500, assessed at \$2,500; sleeping cars, cost \$16,000, assessed \$6,000; dining cars, cost \$11,000, assessed \$4,000; pay cars, cost \$4,000, assessed \$1,500; and so on down the entire list of rolling stock to "rubble and push cars,"—cost \$30, assessed \$10. The board that fixed these values next proceeded by "unanimous vote" to assess the fixed plant of several roads, by assessments varying from \$2,000 to \$7,500 per mile. After having assessed the Santa Fé, Union Pacific and some of the other most important roads of the state, the board fell into a thoughtful mood and devoted one whole meeting to the question of a proper basis for assessing right-of-way, road bed, trackage, etc. "The value of a line of railroad," declared the board, "is not easy to determine. The most potential factors in determining such value may be named as follows." Here the board laid down a series of seven propositions, the last of which is a blanket provision including all the rest. The seven factors are:

- (1) actual cost of road ready for use,
- (2) business afforded by country along the road,
- (3) business done by road, considering competition,
- (4) cost of operation,
- (5) terminal facility advantages,
- (6) whether a trunk line or feeder of a trunk line,
- (7) "What is actual value of road today?"

This illustrates the gropings of the board after some true test of faculty or ability of the roads to pay taxes. The quest

²⁰ *Assessment of R. R. Property, etc.* Pamphlet. Topeka, 1891.

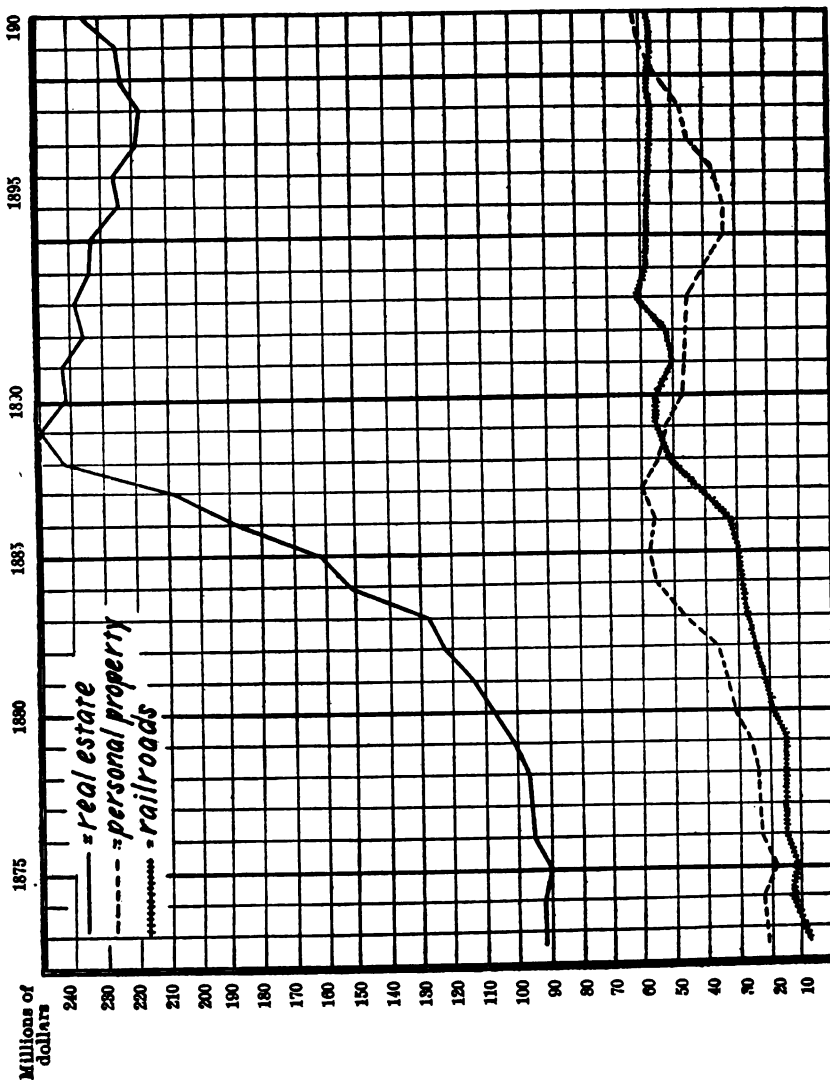
is rather a baffling one thus far. Aside from these data, the board has access to the reports of gross and net earnings so far as these are returned to the state board of railroad commissioners. But some roads refuse to make these returns, and others use book-keeping which is more misleading than enlightening. So the board of assessors scarcely hope to attain more than a rough justice. Considering all methods of assessment thus far observed, the conclusion seems warranted that railroads are assessed low, but not so low as other forms of property.

It is a matter of belief, based on common observation, that personal property in a community as old as Kansas, should be at least equal in value to the real property. But personal property and railroads are falling so far behind real estate in the assessment returns that Kansas seems rapidly tending towards a single tax on land and land-improvements.

The situation is accurately exhibited in the interesting diagram following:

PLATE II.—ASSESSMENT OF REAL ESTATE, PERSONAL PROPERTY, AND RAILROADS.

Showing increase in assessment of real estate, relatively and absolutely, from 1873 to 1902.



Prior to 1873 railroads were not separated from other personal property in the assessment returns, and hence the table begins at that year.

The state board of railroad assessors has also within the purview of its authority the assessment of Pullman and other sleeping cars. The board of railroad commissioners require full reports covering capital stock, cost of equipment, gross earnings, operating expenses, dividends declared, miles run in Kansas, and total mileage. "Miles traveled" is the basis of the proportion used in determining the value of the equipment assignable to Kansas. Since these cars make regular trips, it is easy to determine what proportion of their run is within the limits of Kansas and what proportion elsewhere. Each car is usually assessed at from \$4,000 to \$6,000. If half its run is in Kansas, then half the value of the car is considered taxable in Kansas. These cars yielded a tax in 1902 of \$8,655.19.²¹ The same year this company paid a total tax in Michigan of \$6.45.²² This beggarly amount was due to a defect in the wording of the law, by which the technical rights of interstate commerce were trenched upon.²³

The railroad companies using the Pullman cars are held liable for the tax on them. The law for assessing Pullman cars provides that the proper persons shall list "all sleeping cars, dining cars, palace or other cars that make *regular* trips over any railroad in this state, and not owned by such railroad company." By the wording of this statute, it is evident, that cars not used *regularly*, such as refrigerator and fruit cars, escape assessment and taxation altogether. And this is becoming an item of considerable importance.

In the assessment of express companies the gross error is still embraced of ignoring the unity of this class of property. Each individual horse, wagon, and pouch is assessed as though it were a separate and independent piece of property used wholly for local purposes. And this is done in spite of the fact that the Supreme Court has made contrary rulings in the case of

²¹ 17 R. R. Comm. Report.

²² 2 Report, Board of State Tax Comm., Michigan, p. 78-9.

²³ *Fargo vs. Michigan*, 121 U. S., 230.

railroads, telegraph companies, sleeping car companies, and lastly, in the case of express companies themselves. The famous case of this kind is that of the *Adams Express Company vs. Ohio State Auditor*,²⁴ in which Chief Justice Fuller renders an opinion against the express company. One of the best pronouncements ever made on the subject of taxation, however, was that given by Justice Brewer on a rehearing of this case. Since this celebrated utterance applies to express companies in all the states the following words are quoted from it:

"Now, it is a cardinal rule which should never be forgotten that whatever property is worth for the purposes of income and sale, it is also worth for the purposes of taxation. * * * If a statute properly construed, contemplates only the taxation of horses and wagons, then those belonging to an express company, can be taxed at no higher value than those belonging to a farmer. But if the state comprehends all property in its scheme of taxation, then the good will of an organized and established industry must be recognized as a thing of value. The capital stock of a corporation and the shares in a joint stock company represent not only the tangible property but also the intangible, including therein all corporate franchises and contracts and good will of the concern.

"Now the same reality of its value of its intangible property exists when a company does not confine its work to the limits of a single State. Take for instance, the Adams Express Company. According to the returns filed by it with the auditor of the State of Ohio, as shown in the record of these cases, its number of shares was 120,000, the market value of each \$140 to \$150. Taking the smaller sum gives the value of the company's property taken as an entirety as \$16,800,000. In other words, it is worth that for the purposes of income to the holders of the stock, and for the purposes of sale in the markets of the land. But in the same return, it shows that the value of its real estate owned in Ohio was only \$25,170; of its real estate owned outside of Ohio, \$3,005,157.52; or a total of \$3,030,326.52; the value of its personal property in Ohio, \$42,065; of personal property outside of Ohio, \$1,117,426.05; or a total of \$1,159,491.05;

²⁴ 165 U. S., 194.

making a total valuation of its tangible property, \$4,189,818.57, and upon that basis it insists that taxes shall be levied. But what a mockery of substantial justice it would be for a corporation whose property is worth to its stockholders for the purposes of income and sale, \$16,800,000, to be adjudged liable for taxation on only one-fourth that amount. The value which property bears in the market, the amount for which its stock can be bought and sold, is the real value. Business men do not pay cash for property in moonshine or dreamland. They buy and pay for that which is of value in its power to produce income, or for purposes of sale.

"In conclusion, let us say, that this is eminently a practical age; that courts must recognize things as they are and as possessing a value which is accorded to them in the markets of the world, and that no fine-spun theories about situs should interfere to enable these large corporations whose business is carried on through many States, to escape from bearing in each State such a burden of taxation as a fair distribution of the actual value of their property among those States requires."

Pending this decision, some express companies were making strenuous efforts to escape taxation altogether. The United States Express Company, for example, filed with the Kansas board of railroad commissioners, a very brief report concerning its capital stock of \$10,000,000, its mileage, etc., and concluded its statement with this interesting declaration: "This company has prepared this report, giving such information as it is able to give at this time, but it is given under protest, on the grounds that the business of the United States Express Company is interstate commerce and is regulated only by the Congress of the United States, and that the State of Kansas has no authority to exact reports concerning its business or to impose taxation on it thereunder." This statement is duly sworn to by the vice president of the United States Express company.²⁵ The personal property reported by this company in Kansas (it having no realty here) was \$500; its mileage in Kansas one twenty-fifth of its total mileage, and its gross earnings for the

²⁵ 18 Annual Report, Board R. R. Comm., p. 245.

state, \$16,601.50. The tax on this \$500 of personalty would have amounted to some \$20, and the attempt was even made to dodge this. A distribution of the market value of this corporation, according to mileage, would have assigned to Kansas one twenty-fifth of \$10,000,000, or \$400,000.

Under the Supreme Court decision there could not be a complete evasion of all taxes. But instead of applying the method of valuation to these companies which Justice Brewer commended as fair, their assessment is left entirely to the local assessors. They assess a few horses, wagons, pouches and safes, and a small amount of realty, with no consideration of their income producing power as parts of a great business unity. Thus the United States Express company in 1903 paid a few dollars tax in Topeka (its principal Kansas office) on \$365 worth of property, and a city license fee of \$100. Or take the 1902 report of the Adams Express Company, for instance.²⁶ They report a dividend of \$8 a share on 120,000 shares, that is, \$960,000 for the year. They have no realty in Kansas and only \$3,040 worth of personalty. If their earnings are apportioned to Kansas according to their mileage, then 1.48 per cent. of the dividend, or \$14,177 is due to the Kansas business.²⁷ This would represent a net income on \$3,040 of \$14.177 in one year. Since the state tax rate in 1902 was 5½ mills, then if this property were really assessed, as reported, at \$3,040, this express company paid to the state in taxes the munificent sum of \$16.72. State and local taxes together would swell the total taxation on \$3,040 to \$133.76. This paltry figure is made somewhat larger by license fees charged in a few of the cities, but in any event, it is absurdly low.

The American Express Company reports \$6,973.87 worth of personalty in Kansas, and no realty.²⁸ By their system of bookkeeping they show \$7,883.33 of gross earnings in the state, and \$20,993.53 of gross expenses. Yet they show no disposition to quit the state.

The Pacific Express Company is the most extensive one in the

²⁶ 17 Report, Board R. R. Comm., p. 69. ff.

²⁷ Total Railroad Mileage in U. S., 36,017 miles; Total Railroad Mileage in Kans., 532 miles.

²⁸ 17 Rept., R. R. Comm., p. 70.

state, having one-sixth of its total railroad mileage here. They report dividends in 1902 of 13½ per cent. on the common stock, or \$810,000 of dividends. The value of their tangible property in the state does not appear in their report. One-sixth of their market value, however, is \$1,000,000, counting the stock at par. But the present method of assessment can take no cognizance of this. In Topeka, where their largest office in the state is located, tax is paid on a \$600 assessment. This includes a building on leased land.²⁹

The Wells Fargo Express Company has about the same mileage in Kansas as the Pacific, but it constitutes only about one-tenth of their total mileage. They are capitalized at \$8,000,000. They report dividends of 8 per cent. for 1902, or \$640,000. In the matter of unintelligible reporting, they easily take the lead. Under "operating expenses" we find these items:³⁰

"Salaries of general officers.....	\$201,900 00
Stationery and printing.....	6,852,670 81
Stationery and printing, general offices.....	120,467 75"

Aside from their license fee of \$100, they paid taxes in Topeka in 1903 on an assessment of \$1,855 of realty and personalty.

A great part of the business of these five express companies is transacted through the hundreds of depot offices in the small towns and villages of the state, without the expense to the companies of maintaining separate offices and buildings. In these cases, of course, there is practically no tangible property to assess. Surely the public welfare demands that these companies be subject to assessment by a state board.

All telegraph and telephone companies with wires crossing county lines come under the authority of the state board of telegraph and telephone assessors. The constitution of this board is identical with the board of railroad assessors, but it meets one week earlier in April of each year. Detailed reports are called for from the various telegraph and telephone companies of the state, and these companies are also given a hearing before the board. They regularly ask for a reduction over the preceding

²⁹ Private letter of County Treasurer of Shawnee county, Kans., Feb. 2, 1904.

³⁰ 17 Rept., R. R. Comm.

year's assessment. The board makes "construction and business" of each plant the basis of valuation. Franchises are not considered, but the board fixes the value of this property by comparison with the valuation of other personal property within the state.²¹

Assessment of street cars is still in the dark ages of progress. Here also only tangible property is considered. This can hardly be called a rough approximation to real values. The operations of this scheme cause the wild fluctuations exhibited in the brief table below:

ASSESSMENT OF STREET CARS.²²

County.	Cost of plant.	Assessed value.	Per cent of cost.
Atchison	\$425,000	\$25,400	5.9
Bourbon	124,000	9,120	7.3
Cowley	49,241	200	.4
Cowley	25,000	220	.8
Crawford	134,050	6,000	4.4
Leavenworth	85,438	35,150	41.1
	\$842,729	\$76,090	9.

Interurban and intercounty car lines are rapidly multiplying and promise to produce even wider disparities in assessment than the above, unless state assessment is provided.

Insurance companies constitute a form of corporation that the state also finds it difficult to tax wisely. Their tangible property—what little they may have—is assessed and taxed through the local agencies. The state insurance department exacts fees of different kinds, amounting practically to a tax. Every fire insurance company doing business in a city where there is a fire department worth \$1,000 or more, must pay to the superintendent of insurance \$2 on every \$100 received from premiums on fire and lightning policies within that city. This money then goes into the funds of the Firemen's Relief Association of the various cities, now 112 in number, meeting the requirements. In 1897, \$16,239.90 was received from this source; in 1900, \$20,640.26; in 1901, \$22,561.95.

²¹ *Genl. Stat.*, 1901, ch. 107, art. 5.

²² 13 *Bureau of Labor*, 1897, p. 118-20.

Still further exactions are made of foreign insurance companies doing business in the state. For several years they paid annually to the insurance department 2 per cent. on all premiums received. In 1898 this was increased to a payment of 4 per cent. on all premiums received during the year.

The insurance department costs the state from \$6,000 to \$9,000 a year, but returns in the way of taxes and fees some \$130,000.²²

In June, 1902, 211 insurance companies were doing business in the state.

The foregoing account of assessment, supplemented as it is with numerous concrete and authentic examples, is deemed sufficient to show the gross excess of inequalities prevailing under present methods. These are necessary evils while the present "system" remains in force. To level off the worst of these inequalities there is employed the machinery of state and county boards of "equalization." The three commissioners in each county sit as a board of equalization when the assessment returns are all in the hands of the county clerk, and it is their duty to inspect the valuations returned for all the property in the county, to listen to all complaints, and to equalize the assessments made by the several assessors by raising or lowering the values as they see fit. The abstract of this assessment roll as thus "equalized" goes before the state board of equalization (secretary of state, auditor,

²² Receipts of Insurance Department:

	1900	1901
For agents' licenses.....	\$19,401 00	\$17,951 75
For charter fees.....	1,190 00	830 00
For annual statements.....	7,275 00	7,780 00
For State school fund.....	6,300 00	6,650 00
For taxes.....	75,698 96	82,025 44
For examinations.....	.....	2,013 46
For firemen's relief fund.....	20,640 26	22,561 95
For miscellaneous fees.....	97 70	97 36
	\$130,602 92	\$139,909 96

Expenditures of Insurance Department:

	1900	1901
Maintenance of department.....	\$6,734 07	\$9,087 70
Firemen's relief fund.....	20,640 26	22,561 95
	\$27,374 33	\$31,649 65

and treasurer). This board tries to strike a rough justice among the counties by raising the assessment of one county 10 per cent., lowering another 5 per cent., and so on, but not reducing the aggregate assessment. (However, it is sometimes necessary to lower the aggregate assessment, the statute to the contrary notwithstanding.) County attorneys appear before the board and ask for reductions, when they fear their county is likely to pay more state tax than its share.

But the task before these boards is too great for them or any similar board to perform. Such chaotic assessments cannot be equalized, and the most that is accomplished is merely to mitigate the evils and thus perpetuate a bad system. Since no assessment is either high or low, except in comparison with some other assessment, and no man knows his neighbor's assessment, it follows that few men appear before the county boards of equalization and ask for a change in their valuation. The few men who do appear are not as a rule men with the small holdings and whose assessments are the highest.

When this so-called equalization is completed, the next steps are the levy and collection of taxes. The county commissioners levy and apportion the county taxes among the townships. The township trustee levies the township tax. In school districts the school tax is levied or voted at the annual school meeting, after the fashion of the early New England town meetings. But in cities of the first and second class, the school district is coterminous with the city, and here a board of education makes the levy. The city tax, like all its other financial matters, is in the hands of the city council.

But the great anomaly appears in the levy of the state tax. The state legislature determines not only the amount to be raised, *but also the rate*. That is, in substance they say at their biennial session, we will raise \$2,000,000 a year for the next two years, and the rate shall be 5 mills on the dollar. This levy is always made in the early spring, several months before that year's assessment returns are in, to which this rate shall apply. Hence the levy must be based on the assessment returns of the preceding year. This imposes the preposterous duty on the state board of equalization of patching up the assessment returns to fit

the arbitrary and senseless rate fixed by the legislature. If the returns happen to be about the same as the year before, no change in their aggregate is needed. But great fluctuations are likely to occur, and do frequently occur. Thus from 1898 to 1900 there was an increase in assessed valuations of \$17,000,000. At the rate of the state levy, this would have raised a surplus revenue of \$93,000. From 1883 to 1884 the increase was \$33,800,000. From 1887 to 1888 the increase was \$42,300,000. The 1900 assessment returns showed an increase over the preceding year of \$13,500,000. On this basis, the levy by the legislature would have returned \$80,000 of surplus revenue. The state board could not change the rate to fit the needs, so lowered the assessment returns by \$11,675,044. So the law declaring such aggregate shall not be lowered fails to operate. For the support of the State University, the legislature does appropriate a stated amount, and the rate necessary to produce this amount is adjusted by the state board. Why this rational plan is not applied to all other appropriations is difficult to comprehend. That it is legal has already been decided by the supreme court of the state, where the opinion was rendered that "The legislature may levy taxes by requiring a gross sum to be collected from the taxable property of the state as well as by fixing a rate per cent."⁴

The chief evils of this system are not its awkwardness and inconvenience. The worst feature in this levying of a certain *rate* of taxation by the legislature rather than appropriating a definite sum, is the fact that should the local divisions ever desire to obey the law and raise their assessment of property to the "actual value in money," then the general state revenue would swell to four or five times its normal size. Thus the evil of underassessment is intrenched and perpetuated.

Collection of taxes is effected through the county treasurers, whether the taxes are state or local. The treasurers receive the completed tax roll from the county clerks. The auditor of state notifies the county what its portion of state tax is, the apportionment being made, of course, on the basis of the "equalized" returns from the state board of equalization. The county must then furnish this sum, or be held liable for delinquent taxes.

⁴ 56 *Kans.*, 81.

It is then a matter of indifference to the county whether it uses its own equalized assessment as a basis of levy and collection, or takes the equalized returns from the state board, for the state board has only modified it as a lump sum. For the county follows the rational method and adjusts the levy to fit the appropriation, the fresh assessment returns being the basis of the levy. Those industries assessed by the state board, such as railroads, telegraph, etc., pay their taxes locally, according to the values assigned to each county, township, school district and city. For since there is no separation of the sources of revenue, the state, like the school district, has its revenue collected and remitted by the county treasurer.³⁵

Taxes are due and payable to the county treasurers on and after November 1. Half may be paid by December 20, and half six months later. If the second half is paid by December 20, a 5 per cent. rebate on it is granted. If either half remains unpaid when due, a 5 per cent. penalty is added. Ample provisions are made for the sale of both personal and real property for unpaid taxes. On the whole, the system of collection is on a fairly sound business basis.

Some observations are timely in closing this discussion of taxation. We have seen that, lacking any central supervision, each local assessor is a law unto himself. In the words of that worthy Kansan, J. G. Haskell,³⁶ "every assessor does that which is right in his own eyes and there is no sufficient supervising authority. * * * Legislation is inadequate. The clash of diverse inter-

³⁵ The total taxes paid by railroads amount to about \$2,000,000 a year. From auditor's reports it appears that these taxes have been as follows:

1892	\$1,739,353
1893	2,065,419
1895	2,071,724
1897	2,119,875
1899	2,203,978
1901	1,968,965

This is about one-sixth of all taxes paid in the state. The total taxes paid by railroads up to 1901, are approximately, \$41,790,000. The total subsidies received by the roads for same time, are \$43,718,356.

³⁶ Captain Haskell of Lawrence, Kansas, for over forty years a taxpayer of the state, and best known as the architect of the state capitol, came with the New England migration to aid the free-state cause. As a trained scholar and substantial citizen, he is peculiarly well qualified to speak. The quotation above is from a private letter of December 18, 1903.

ests, coupled with the effort to secure equality under unequal conditions ("equal treatment of unequals") militates against good legislation. * * * There is defective enforcement of the law. The tax laws must bristle with clear, stringent and arbitrary provisions. All enforcing officers should be removed from local politics."

Full publicity of assessments is one reform demanded by all persons familiar with the evils of the present system. Each taxpayer should know his own and his neighbor's assessment. A permanent state tax board or commission is also imperatively demanded, and under this either county boards, or county assessors with deputies. Separation of the sources of state and local revenue would then make the machinery of the state board of equalization wholly unnecessary. These reforms are suggested here, not because they are remedies for all the ills of the present system, but because they are steps in a forward direction, already taken by progressive states such as New York, Pennsylvania, and Wisconsin; and are compatible with the Kansas constitution. Nothing has been gained thus far, or is likely to be gained of permanent good, through mere legislative committees.

Fiscal Affairs.—Moneys in the state treasury are credited to certain funds which are either permanent or annual; the most important annual fund being the general revenue fund. Salaries of state officers, and expenses for the general conduct of the state government are all paid from this fund. The largest fund is, of course, the permanent school fund. This is invested first in Kansas state bonds, and then in such local bonds as are available. The present state debt (January, 1904) of \$632,000 is all held in the permanent school funds,—\$9,000 in the University fund, and \$623,00 in the common school fund. Transfers of money from one fund to another are common, when the fund is not a permanent one. This happens sometimes to the sinking fund— as in 1902, when it was transferred, *in toto*, to the general revenue fund.

Interest on the state bonds was commonly made payable at some selected bank in New York City, known as the state fiscal agency. Here all coupons were clipped and bonds paid when

due, the state paying one-fourth of one per cent. commission for the service. Latterly when the state bought up some of its own bonds before due, and had to forward them to New York to have the coupons clipped, the practice was inaugurated of making both bonds and interest payable at home. This is now the custom with all small bond issues that can be floated in the home market.

The budget, or estimate of expenditures for the next two years, is prepared by the auditor in time to be presented with the governor's message to each newly-convened legislature. All moneys must be voted every two years, according to the constitution. This of course holds the state institutions to a stricter accountability. This is doubtless salutary in the long run, but not infrequently the State University has been made to suffer from spasms of economy which sometimes overtake the legislature. The fiscal year closed November 30, as long as the sessions of the legislature were annual; but beginning with the biennial session in 1877, the close of the fiscal year has been June 30. Thus the legislature of 1901 makes appropriations covering the period which ends June 30, 1903. In January, 1903, the legislature convenes and reappropriates a part of this money for legislative expenses. Thus the incoming legislature commences to spend money at once, but the revenue which it provides does not begin to come in till about one year later.

The passage of the budget to a vote is in most points similar to the course pursued by Congress with its committee system. The part of the governor's message on finance is referred by each house to its ways and means committee. This is a large, standing committee, usually having nine members in the Senate and seventeen in the House. These two form a joint ways and means committee to consider all general appropriation bills. These bills may originate in either house. Bills recommended by the joint ways and means committee are then discussed by the houses in the committee of the whole. In the rush towards the end of the session a "revision committee" may revise the list of bills and strike off a few, thus precluding their coming to a vote. This, of course, is not likely to happen to any important revenue measure.

The law has provided all the treasury machinery deemed necessary for the custody of the state funds. The deposit system is not yet adopted, although the need of it is well established by the experiences of the past. All moneys are to be kept in the treasury, except the amount with the New York fiscal agency necessary to meet maturing interest and bonds. This agency pays 2 per cent. interest on average daily balances. This would seem to suggest that a few hundred thousand of other state funds might be wisely deposited in good banks, thus providing the state an interest-income of a few thousand a year, and affording circulation to otherwise idle capital. To safeguard the treasury, the law calls for its monthly examination by the governor, secretary, and auditor, and also further provides for inspection by a legislative committee and an expert accountant whenever necessary. It is physically impossible, however, for the governor, secretary, and auditor to make an adequate inspection as often as the law demands, and perform the other duties of their offices. Hence this law is not obeyed.

The treasurer is bound by a solemn oath and by a bond of \$1,000,000. The auditor also takes a formal oath, and gives a bond for \$10,000. The auditor and treasurer are to serve as checks and balances against each other. The auditor must keep account of all appropriations, audit all accounts of moneys paid out of the treasury; and issue his warrant on the treasurer for amounts due by law. The treasurer is custodian of all state funds, and through his office all income must pass and all expenditures be made.

A closing word must be said on the subject of banking. Now that the system has recovered from the financial panic of '93 and '94, and the "house-cleaning process" of the state bank commissioner has been completed, the banks have entered upon a period of sound expansion. The use of bank checks and bank credits is rapidly spreading in the transaction of business throughout the entire state. Thus in the period of 1899 and 1900, while deposits increased over \$9,000,000, the actual cash held by the banks increased only \$178,100. This element of elasticity in the state's monetary mediums, under the wise surveillance of the state bank commissioner, is a mark of progress

in the economic life of the state. The character of the bank deposits in the years 1900 and 1902 proves very interesting as shown in the table below:³⁷

KANSAS BANK DEPOSITORS CLASSIFIED.

	1900.	Per cent.	1902.	Per cent.
Total number of depositors.....	111,132	100	139,167	100
Male.....	89,533	80.5	113,061	81.2
Female.....	16,938	15.2	21,854	15.3
Farmers and stockmen.....	60,992	55.	76,938	55.2
Merchants.....	8,909	8.	11,695	8.
Public accounts.....	2,345	2.1	3,526	2.5
Accounts of corporations.....	1,516	1.3	1,455	1.
Farmers' and stockmen's deposits	\$17,839,318	56.5	\$27,240,317	68.0
Public accounts.....	2,533,005	8.0	3,204,633	8.0
Corporations.....	2,058,067	6.5	2,002,964	5.0

Conclusion.—It is not within the province of this history to devise remedies for such evils as exist in the present financial system of Kansas, but rather to report facts as they are, whatever they may be. It is hoped that both the good and the bad features of this system have been impartially and accurately set forth. Since reform cannot come suddenly, but must follow the slow course of an evolutionary growth, it is the sincere hope of the writer that this reform may take the direction of a gradual displacement of the general property tax. Then, with a proper segregation of the sources of revenue, there may be introduced a revenue system calculated to distribute its burdens justly and wisely, from both the fiscal and social standpoints.

Not till some constitutional limitations are removed, however, can the tax power be employed for important social purposes in addition to its fiscal uses. Certain provisions regarding an imaginary "equality" are a barrier to this. In the matter of expenditure the state is freer from constitutional limitations. Hence there is a constantly expanding outlay as the state undertakes to meet growing wants and supply new needs. This taking on of new functions, however, has not only been necessary, but wise, and its growth in the future will likely remain un-

³⁷ 5 and 6 *Bien. Reports, Kansas Bank Com.*

checked. For, as our great economists have shown, taxation increases with freedom.³⁵

In spite of the rigid system of financial administration and the shortcomings of the systems of outlay and income, the outlook is not bad. Light is breaking, as is evidenced by the increasing attention directed to this subject by each succeeding legislature of recent years, and especially by the legislature of 1901 in its creation of a temporary tax commission of able men.

³⁵ Ely, *Outlines of Economics*, p. 356. Dr. Ely here shows that small expenditures mean small results; despotic Russia spends 13 cents per capita for schools; but Zurich, Switzerland, \$1.25.

CHAPTER IX

FINANCIAL HISTORY OF TOPEKA, KANSAS

As late as the beginning of the Civil War, Topeka was little more than a straggling group of log huts on the banks of the Kansas or Kaw river. The city dates its founding back to the year 1854, when seven persons—the front edge, as it were, of the wave of Kansas Territory migration—made this their permanent stopping place. Within three years the little group had increased to five hundred souls, and Topeka became an incorporated village. The outbreak of the war caused a heavy shrinkage in population, for nearly every able-bodied man within the age-limits enlisted as a soldier.

Not till 1861 did Topeka succeed in making good her metropolitan claims over her neighbors. This year, with a population of some six hundred souls, the little city was made the capital of the state. From this time population rapidly increased till the "hard times" of the early seventies set in. Then followed another period of rapid expansion, till the reaction of the nineties caused a temporary setback. This was a period of decline for many cities of the Middle West, a great many of them showing an actual falling-off in population. Topeka, however, managed to hold its own. Gains were made at each census from 1860 on, but very fluctuating gains, to be sure. These fluctuations run as follows: from 1860 to 1865 the gain was 70 per cent.; from 1865 to 1870, 330 per cent.; from 1870 to 1875, 25 per cent.; from 1875 to 1880, 115 per cent.; from 1880 to 1885, 74 per cent.; from 1885 to 1890, 31 per cent.; from 1890 to 1900, 8 per cent. These variations in the figures are due to various "boom" periods, to a heavy immigration of colored people from the South during the seventies, and to general conditions affecting the prosperity of the West. The census of 1860 showed a population of 759; the 1900 census, 33,608. The great Kaw river

floods of 1903 and 1904 caused a heavy exodus which will doubtless affect the next census returns.

When Topeka reached a population of 15,000 (in 1880), it became, under the general laws of the state, a city of the first class. The same laws or "charter" apply to all cities of this class in the state.

The charter of Topeka is very liberal in its grant of powers. In things financial, almost complete autonomy is enjoyed. However, in one important matter—the regulation of the liquor traffic—the city occupies a peculiar and anomalous position. The city cannot license and supervise this business, because the state constitution peremptorily prohibits all manufacture and sale of intoxicants within the state. And, on the other hand, the federal government issues permits to sell intoxicants, regardless of all city or state regulations. Hence the city has a vigorous traffic, carried on by drug stores with federal permits, which is wholly unamenable to municipal or state rules. The city must look on, supinely, then, while the liquor traffic flourishes in her midst, bringing her not only no revenue, but actually increasing her police-court expenditures. Some other cities of the state do have open saloons, contrary to law, and "fine" them stated sums once a month instead of licensing them for the same amount. Topeka seems to demonstrate, however, that so far as her fiscal life is concerned, she has no need whatever of saloons, and, indeed, prospers best without them. Common observation of the cities of the state verifies this claim.

A few specific provisions of the city's charter may well claim our attention at this point. The duties of the mayor are clearly set forth in these words: "He shall from time to time communicate to the council, in writing, such information and recommend such measures as in his opinion may tend to the improvement of the finances of the city, the police, health, security, ornament, comfort and general prosperity of the city."¹ As a matter of fact, the mayor does not "communicate in writing" to the council, so this provision remains up to the present a dead letter. But as to the broad functions of the city-corporation, we see them outlined in the words, "improvement of the finances of the city, the police, health, security, ornament, comfort and

¹ *Revised Ordinances of 1888*, Art. IV, sec. 44.

general prosperity of the city." The city is thus like a state within a state, an *imperium in imperio*. In carrying out these various functions, in providing for its own health and security, its own comfort and ornamentation, the city must receive and disburse considerable revenue.

Topeka's charter provides that the public utilities—water, light and street railways—may, at the option of the city, be owned by the city.² (1) As to water. The city may grant a thirty-year franchise, and as a consideration therefor, must require ten per cent. of net earnings of the company, over and above eight per cent. on the investment, after deducting the reasonable cost of maintenance, operation and taxes. The city may acquire the plant after ten years from the time of granting the franchise. The price shall be set by three commissioners (one selected by the city, one by the company, and one an engineer, by the judge of the court). A popular vote shall then decide whether to take the property at that price, and if the decision is an affirmative one, the city may issue thirty-year bonds at six per cent. or less. (2) As to light, heat, power, and street railways. The charter provides here that the city may grant a thirty-year franchise and may extend the same another thirty years. The consideration shall be ten per cent. of the net earnings, over and above ten per cent. earnings on the investment. The city may acquire the plant at expiration of franchise.

We see therefore, in the foregoing, what the city *may* do under its charter. What is actually done in the matter of these public utilities we shall discuss in detail under appropriate paragraphs below. But it should be distinctly stated here that the street car, gas and water companies pay the city nothing for their franchises. There are other activities of a quasi-public and a private nature, into which the city must enter in the performance of its diversified functions. We shall examine, therefore, all expenditures of the city in the living of its full life, in the fulfilment of its every function of whatever nature. The significant facts in the growth of city expenditures will be duly pointed out. This will lead naturally to a consideration of the city's income,

² *Laws of Kansas*, 1908, ch. 122.

its sources, methods of collection, etc. The city will be seen here in various roles, from that of a simple owner of income-bearing property, to that of a sovereign imposing taxes upon subjects. This will be followed with a discussion of the municipal debt, fiscal machinery and city accounting. This last offers a rich field for criticism, for as a press writer has so ably said:³ "City finance is such a confusing and altogether hopeless tangle of discordant bookkeeping, that the city clerks' reports on current receipts and expenses are rather more likely to be misleading than to give to the average citizen a clear idea of the condition of affairs. The calendar year overlaps the fiscal year, and the tax receipts overlap both."

EXPENDITURES

The city's life and functions are well exhibited by its expenditures from year to year. The following table is accordingly given showing fifteen important objects of outlay during six years. It is unfortunately impossible to go farther back than 1892 in any accounts, since the records prior to this date are lost or destroyed. From 1892 to 1897 faulty bookkeeping vitiates the records to such an extent that they cannot be used for comparisons or conveniently tabulated. Hence the table below exhibits expenditures from 1897 to 1902, inclusive:

EXPENDITURES, 1897-1902

Object	1897	1898	1899	1900	1901	1902
Education	\$80,514	\$100,629	\$150,093	\$155,198	\$192,028	\$144,205
Fire	26,718	27,907	26,177	26,230	29,827	28,809
Water	36,975	.....	29,000	14,500	14,877	.....
Police	22,145	23,336	20,297	20,539	23,636	26,573
Light	20,063	13,924	11,197	18,751	19,599	14,187
Health	5,098	4,431	4,232	9,013	9,094	11,993
Streets	42,136	198,586	87,703	159,130	289,342	184,887
Parks	445	119	555	4,597	4,664	11,647
Buildings and im- provements	12,911	4,612	2,313	43,158	66,874	722
Admin. salaries	11,784	12,674	10,043	15,446	21,670	21,883
Judgments	35,698	14,787	6,109	4,363	3,158	2,072
Elections	2,650	2,805	3,597	3,271	3,317	3,500
Printing	858	844	1,084	1,796	1,353	2,830
Library	6,942	5,020	3,827	5,922	3,770	6,044
Subsidies .....	.....	.....	.....	75	60,248	.....
Totals	\$314,955	\$409,674	\$356,227	\$484,389	\$743,457	\$449,349

³ *Topeka State Journal*, Sept. 6, 1904. p. 10.

This table represents but fifteen of the important functions of the city, chosen because satisfactory statistics were available. But, choosing 1897 as a typical year, we find that the city expended for all purposes the following amounts:

Education	\$90,514
Fire	26,718
Water	36,975
Police	22,145
Light	20,063
Health	5,098
Streets	42,186
Parks	445
Buildings and improvements.....	12,911
Administrative salaries	11,784
Interest on debt.....	16,805
Judgments	35,666
Miscellaneous	2,161
Elections	2,500
Printing	858
Library	6,942
Total	\$333,831

Charity.—Charity, it will be noticed, does not appear in the list above. This is for the reason that the city poor are considered county poor, and hence obtain relief through the county officials, at county expense. There is a regular county one-mill tax-levy for the poor. This unquestionably places some undue burdens on the rural districts of the county, but custom has adjusted the yoke to their necks. There seems to be little thought of change.

Attention must now be directed in some detail to the separate functions of the city, that a clearer understanding of them be obtained. We find them today evolutionary growths, and in process of further evolution.

Education.—The city maintains an efficient graded school system, including a city high school and a manual training high school. The high schools are used in common by white and colored children, as are many of the ward schools. In certain parts of the city, however, where the colored population predominates, separate schools of equal rank are provided for the colored children. This is in accordance with the city charter.

Expenditure for schools is divided into three heads; namely, (1) general fund, or maintenance, (2) interest and sinking

fund, to meet maturing bonds, and (3) building or construction account. In 1903, when the assessed valuation of the city was \$11,000,000, the levy for these different purposes was as follows:

General fund (maintenance).....	12 mills, or	\$182,000
Interest and sinking fund.....	1 mill, or	11,000
Building	8 mills, or	33,000

Total16 mills, or \$176,000

The school levy shows a decided tendency to increase with the increase in population. For example, this has been the course since 1892:

Year	Levy in mills
1892	9.8
1893	9.8
1894	10.0
1895	10.0
1896	10.0
1897	10.0
1898	11.0
1899	16.0
1900	16.0
1901	15.5
1903	16.0

This is not due, however, to a per capita increase in outlay for schools, as the bald statistics would seem to prove, but is due rather to the growing evil of under-assessment.

The different sources of revenue for city schools may be seen at once by a glance at the table below:

TOTAL INCOME FOR SCHOOLS FOR THE YEAR ENDING JUNE, 1904

Balance from last year.....	\$2,152 89
Taxes	191,610 97
From school fund.....	11,417 95
Interest (bank deposits).....	364 02
Tuition	2,024 50
Sale of material.....	148 98
Rents	30 00
Miscellaneous	188 85
Sale of bonds.....	122,000 00

Total \$329,937 61

Fire.—Like other cities, Topeka first depended upon a volunteer fire department. In 1870 the city purchased a Sibley steam

fire engine, and a volunteer fire company was organized. Improvements were gradually introduced during the next few years, and a small compensation was allowed the members of the company. "The chief, G. O. Wilmarth, laid the foundation of the present full-paid system, in 1876, by selecting sixteen of the best and most efficient men from the volunteer service as it then existed. This force was then placed under a thorough drill, and paid a fair compensation for their services to the city."⁴

Prior to public water (1882) the company depended upon wells and cisterns. The first substantial building for the department, a stone structure, was erected in 1873. The next year a building was erected for the chemical engine.

In 1882 the Gamewell Fire Alarm Telegraph system was introduced at a cost of \$3,225. At the present time (1904) it comprises about 33 miles of telegraph wires, 50 fire alarm signal boxes, one 4-circuit electric repeater in the fire marshal's office, and other apparatus necessary to complete its efficiency.

The department now is composed of thirty well-drilled officers and men permanently employed. There are four fire stations, equipped throughout with good modern apparatus. The water service for fire protection is the "direct pressure" system, comprising 322 fire hydrants, with about 45 miles of water mains, the diameter of the mains running from 4 inches to 18 inches. The yearly losses by fire have been kept at a very low figure,—\$36,312 in 1901, \$19,379 in 1902.

The expenditures for this department have showed a tendency to remain almost stationary, despite the growth of the city. The following table shows the amounts expended for the maintenance of this department since 1892:

1892	\$27,634
1893	27,473
1895	27,124
1897	26,718
1898	27,907
1899	26,177
1900	28,230
1901	29,827
1902	28,809

⁴ Giles, *Thirty Years of Topeka*, p. 398.

According to the value of the service rendered, this is undoubtedly one of the cheapest departments of city government.

Water.—We have already noted the provisions in the charter concerning water. In 1881 a proposal was made to construct a municipal plant at a cost of \$281,000, but the proposal was defeated. A franchise was then given (without compensation) for twenty years to a private company. This company received the usual rights and privileges to use city streets, alleys, etc., for water pipes, with the condition that they repair the street torn up in laying or repairing pipes. Other conditions met by the company were: (1) the capacity of the plant should be 3,000,000 gallons, fire pressure, in 24 hours; (2) there should be 15 miles at least of mains and distributing pipes, 4 to 16 inches in diameter; (3) the city council should designate route of pipes; (4) the city obligated itself, at the end of 20 years to extend the franchise for 20 years, or to acquire the plant on "paying therefor the fair and equitable value thereof;" (5) the company should give a clear title; (6) the city rented for 20 years 150 hydrants at \$7,000 a year; additional hydrants should be furnished, if desired, at \$50 a year; each future extension of pipe should furnish the city 10 hydrants per mile, for \$500 a year; when number of hydrants should reach 300, city might demand all its new ones, when needed, free of rental; (7) the city should have free water for flushing streets, fire department, city buildings, public schools, fountains, etc.; (8) lastly, the amount and quality of water and rates therefor should be regulated by city ordinance.

These conditions being duly accepted by the Topeka Water Supply Company, a private corporation, a Holly water system was put into operation in 1882.

There has been more or less dissatisfaction with the franchise. In 1897 the city paid to the water company hydrant rental for two and a half years, the sum of \$36,975, on the order of the United States District Court. The voters of the city have not yet been ready to pay the price for the plant and place it under municipal ownership. Hence the system remains one of mere city regulation of private property.

Light.—Topeka, in common with many other cities, was con-

vinced of the value of the tower-system of street lighting, when this system first came into vogue. Accordingly, in the spring of 1882, the city council entered into a contract to have seven towers, 150 feet high, erected in different parts of the city, for the sum of \$6,000. These were to display electric lights of the Brush patent; other parties were under contract to furnish electricity. The first tower finished proved a dangerous thing to keep in order, and a sickening disappointment as to its lighting powers. The other towers were never finished, the city compromising by paying \$2,700. The one tower was soon put out of use, and the whole scheme proved a costly fiasco.

The present plant is a municipal plant, owned and operated by the city. It was built in 1888, at a cost of \$55,448.⁵ Its capacity was 184 arc lights for street lighting only (incandescent lights are furnished by a private company). The present plant represents an outlay for construction of \$85,000, and the number of arc lamps is now 342. According to municipal bookkeeping the cash cost of operating the plant for the year ending December 31, 1902, a typical year, was \$12,357.90. The total cost of "operating, maintenance, interest and depreciation" was \$18,308. The cash cost per lamp for the year was thus \$36.13; the total cost per arc lamp per year, \$53.53. The plant was run on a moonlight schedule, 2,296 hours. This is the printed statement of the department. It has been challenged, however. A prominent financier, thoroughly familiar with the subject says; "In general, as to the accounting in the city lighting plant, I have known for years that it was very unsatisfactory, that they included in their statements only the actual cash expenditures directly chargeable against the plant, and that even then, certain expenses which ought properly to be charged to the plant, got into the other accounts. No provision was ever made for depreciation, and the plant has been wearing out and they have now to face the problem of a very serious expenditure in order to maintain the present lights, or to give the additional service which the people demand. The fact is, that the entire business has been handled with the apparent desire to make the cost of

⁵ Statement (Leaflet) of City Ed. Light. Dept., H. K. Goodrich, Supt., Topeka, 1903.

operation just as low as possible because each administration has taken a certain degree of credit for the results, and has pointed with pride to the low cost of lighting as compared with lighting offers which have been made by the local commercial plant."

Police.—The police function is a fundamental one. We see it exercised from the days of the "marshall" of the village, on a small stipendium, to the present city force of full paid, uniformed, police officers. It was in the year 1872 that a city prison and police station was erected. The growth of the outlay for the maintenance of this department, both by absolute and per capita amounts, is shown in the table below:

EXPENDITURES FOR POLICE DEPARTMENT MAINTENANCE, 1892-1902.

Year.	Amount.	Per capita amount.
1892.....	\$19,578	.62
1893.....	18,180	.57
1894.....	18,329	.57
1895.....	23,454	.72
1896.....	21,619	.66
1897.....	22,145	.67
1898.....	23,336	.70
1899.....	20,927	.61
1900.....	20,939	.62
1901.....	23,636	.70
1902.....	26,573	.78

The running expenses of this department are about five times the amount taken in by the city in fines and penalties.

Health.—The board of health of the city consists of three men, the secretary of the board being the city physician. He devotes but part of his time to this office, and receives a compensation of \$600 a year. This department enforces a quarantine in all cases of contagious diseases, maintains a free dispensary, looks after the burying of dead animals, cremation of garbage, etc. Expenses fluctuate greatly from year to year, depending wholly upon unforeseen causes. Thus during the fiscal year 1900, the city was put to an outlay of \$5,000 on account of an epidemic known as the Cuban Chickenpox. The average outlay now varies from \$10,000 to \$12,000 a year. The growth of the outlay shows a tendency to keep pace with the growth of the city.

Library.—The beginning of the present city library was a public reading room started by a few women in 1870. From this grew a free public library. The city in 1877 granted a subsidy of \$100 a month, and later increased the amount. The state then gave the right of "perpetual occupancy" of part of the capitol grounds (200 feet by 200 feet), and a \$44,000 library building was erected here in 1880. The cost of the building was defrayed by private donations of local citizens.

The city now makes appropriations for the maintenance of the library, as given in the table below:

LIBRARY OUTLAY	
1892	\$4,085
1893	6,153
1894	2,968
1895	5,141
1896	3,624
1897	6,942
1898	5,020
1899	3,827
1900	5,922
1901	3,770
1902	6,044

A half-mill tax-levy is now customary for this purpose.

Streets.—The first public improvement on record was the improvement of streets. At a meeting of the council, March 24, 1858, the marshal was authorized to grade the "street between the end of the bridge and First Avenue," at an expenditure not exceeding \$150.⁶

Construction and maintenance of streets represent, next to education, the highest item of expense in the city's budget. This is due largely to the unusual width of the streets and to the large amount of paving. Beginning to pave in 1887, during the next sixteen years the city expended for paving (including grading, curbing, etc.) the sum of \$1,543,015, or practically, \$100,000 a year. The first pavement laid was Lake Trinidad asphalt, an expensive material. Most of the asphalt streets now are in a deplorable condition, caused to some extent by the use of inferior materials in construction, and also to some extent

⁶ Gilles, p. 126 ff.

by neglect in cleaning and carelessness in repairing. In 1897 the city made a contract for the repairing and keeping in repair of the asphalt pavement for a term of five years at \$8,000 a year.⁷ At the expiration of this contract in 1902, another contract was entered into for five years, a paving company agreeing to keep the asphalt streets in repair at \$1.58 per square yard. This is costing the city three or four thousand dollars a year, and considering the present condition of the pavement, is looked upon as a useless expenditure of money. A few asphalt streets will likely be resurfaced and preserved, while others, where traffic is heavy, will likely be superseded by other kinds of paving material.

The first brick pavement was laid in 1890 at a cost of \$1.78 per square yard. Two courses of brick were laid on sand with a sand filler. The method proved satisfactory, cost little for repairs, and is still in use. The cost now, however, runs from \$1.12½ to \$1.25 for the same grade of work.

Where traffic is very heavy, the city paved with Colorado sandstone (1887-1889). In March, 1890, contrary to the advice of the city engineer, the city let the contract for paving a heavy business street (Sixth Avenue East) with native limestone. Within a few years this pavement was almost entirely disintegrated.

A few streets were paved during 1887-1888 with cedar blocks, but this too, is practically worn out.

Topeka on January 1, 1903, had 669,518 square yards or 32.23 miles of pavement, divided as to material as follows:

Brick	371,276 sq. yds., or 19.58 miles
Asphalt	193,810 sq. yds., or 7.1 miles
Red Cedar blocks	34,445 sq. yds., or 1.45 miles
Colorado sandstone	51,642 sq. yds., or 2.4 miles
Native limestone	10,578 sq. yds., or 1.1 miles
Macadam	7,767 sq. yds., or 0.6 miles

The outlay for streets is met by issuing internal improvement bonds (street paving bonds, alley paving bonds, sewer and drain bonds). The city pays only for those improvements made at crossings. The bulk of the expense falls, therefore, on

⁷ City Ordinance. No. 1881. Approved Aug. 31, 1896.

abutting property, under a special assessment on the "benefit district," as described under special assessment below.

Parks.—Topeka spends but little for parks, and has but little to show for it. Not till 1900, when the population numbered 33,608, was a park commission created. Three or four thousand dollars a year since that time has been appropriated by the city for the few small parks within the city limits. These aggregate but 22.91 acres, the largest containing but 12 acres. The city also owns 80 acres one mile and a half west of the city, which awaits future development and ornamentation.

Buildings and Improvements.—The Kaw river flows through the city, and this is spanned by one public bridge. The first bridge was built in 1858 by private enterprise, but was washed away a few years later. In 1870 a second private bridge was built, and was purchased the next year for \$100,000, half by the county and half by the city. This allowed a liberal margin above cost to the builders. In 1896 this bridge was replaced by a beautiful Melan arch bridge. This bridge is 540 feet long, and is built of five concrete arches, reenforced with iron. It has a paved roadway and paved sidewalks, 40 feet wide in all. This bridge cost \$150,000 and was paid for by the county. But since the city pays approximately two-thirds of the taxes of the county, this was considered a just apportionment.

For the administrative officers, the city first rented isolated office buildings, paying as high as \$1,500 a year rental. In 1879 a city hall was completed at a cost of \$38,000. Rooms in this not needed by the city were rented for \$2,360 a year, thus making a return to the city of 6 per cent. on the investment. In 1900 a city hall and auditorium was completed at a cost of \$82,832. Under one roof this building provides suitable offices for the city officials, a council chamber, headquarters for the fire department, and an auditorium capable of seating four thousand five hundred people.

The city has also constructed and maintains three other fire stations, police station and city prison, electric light station, "pest" house, material yards, etc. Annual or monthly appropriations are made for maintenance. To meet the extraordinary expenses of construction of all the larger buildings, bonds

were issued. The city has expended \$283,000 for the construction of the various city buildings.

Administrative Salaries.—There are certain city officers, not identified with any specialized department, who administer the affairs of the city as a whole. Their number and functions vary with the growth of the city. At the present time (1904) the city is making an annual outlay for these administrative salaries as follows:

Mayor	\$1,500
Clerk	1,350
Deputy clerk.....	600
Attorney	1,200
Treasurer	1,200
Engineer	1,200
Commissioner of elections.....	1,200
License collector	600
Assessor, \$3 per day	
12 councilmen, each.....	200
City physician	600
Food inspector	800

The following officers have functions readily identified with differentiated departments:

Superintendent of public schools.....	\$2,500
Police judge	750
Chief of police.....	1,000
Police matron	600
Street commissioner	1,020
Supt., electric light.....	1,200
Fire marshal	1,500

Interest.—The city is a heavy borrower of money, and hence the annual payment of interest is an important item of the budget. This amounts to approximately \$20,000 on the bonded debt of the city at large, and \$20,000 on the special improvement bonds, as will be shown in a subsequent paragraph.

Judgments.—Claims of various kinds against the city are allowed each year, often forming an important item of outlay for the year. During the eleven years from 1892 to 1902 the city expended \$74,777 in this manner.

Subsidies and Bonuses.—Topeka, like other Kansas cities, has favored the policy of subsidizing various business enterprises. In 1872, \$100,000 was given to the Santa Fé railroad company for the location of the shops and general offices at Topeka. In

1873, \$74,000 was voted to the Kansas Midland railroad in 8 per cent. 20-year bonds. These bonds were refunded when due for twenty years at five per cent. So the city engages to pay the principal, \$74,000, and interest \$192,400, a total of \$266,400. This is rather a liberal way of donating \$74,000 to the railroad. In 1901 the Santa Fé was voted further aid in the sum of \$59,000, to enlarge the car shops in the city. In 1886 the city donated \$12,000 for the purpose of prospecting for coal. No coal was discovered. The city and county, in 1875, paid \$12,000 (half each) for grounds for a state insane asylum, which was accordingly located by the state on this free site.

About the time the Santa Fé shops were built in Topeka, a Cleveland (Ohio) bridge company was interested in establishing a bridge works at Iola, Kansas. They transferred the shops to Topeka upon a vote by the city to give a subsidy of \$100,000. The constitutionality of such public aid to a private industry was seriously doubted, at the time. The Iola bonds were tested by the Supreme Court of the United States and pronounced void.⁸ Topeka promptly repudiated her issue; the bridge company failed, and the Santa Fé acquired the plant which had been erected. While this case was pending in 1873, a project was brought forward for founding a steel rail rolling mill in Topeka. \$150,000 was voted, and the shops were erected. In 1874 a steel rail was actually produced.

The court decision on the bridge bonds settled the fate of these new bonds. The city recovered them in 1874 and destroyed them. It is not clear yet just what the difference is between a *private* and a *public* enterprise. Hence some subsidies are held constitutional, others unconstitutional.

INCOME

We may classify the city's income as follows:

- Gifts,
- Interest on deposits,
- Rents on city property,
- Fines and penalties,

⁸ 20 Wall., 655; 20 Wall., 668.

Fees and licenses,
Special assessment,
Taxation.

The relative importance of each source is readily seen from this table showing income for fiscal year ending March 31, 1904.

Interest on deposits.....	\$1,920 45
Rent of auditorium.....	683 92
Fines and penalties.....	5,067 26
Fees and licenses.....	6,114 30
Special assessments	70,933 75
Taxes	383,266 00
Total	\$467,985 68

Gifts.—For ornamentation, utility and other purposes, Topeka has received various gifts from her citizens. A \$44,000 city library building is the most conspicuous of these. A benevolent clergyman donated a drinking fountain and also provided funds for the erection of a women's apartment to the city prison.

Interest on deposits.—The city funds, including sinking funds are kept on deposit with banks and yield the city 2 per cent. interest.

Rents on city property.—The city owns a large auditorium which is under the administration of a committee on public buildings. This committee leases the auditorium at rates varying from \$5 to \$75 a day, according to the nature of the entertainment given. Eight classes are described in the city ordinance.⁹ In the case of national or state gatherings attracting at least five hundred people to the city, the use of the hall is granted free. The small annual income from this source is about sufficient to keep the auditorium in good repair.

The city also owns scales for weighing wagon-loads of hay, etc., for the farmers, and these scales now afford \$700 to \$800 a year income to the city.

Fines and Penalties.—An income of some \$5,000 a year is now derived from this source. This is turned into the general revenue fund of the city, but it is not large enough to cover the pay-roll of the city police force.

⁹ Ordinance. No. 2492. Published May 6, 1904.

Fees and Licenses.—According to the charter, Topeka's mayor and council may levy a license tax upon "any and all callings, trades, professions, and occupations conducted, pursued, carried on or operated within the limits" of the city.¹⁰ This is rather a blanket provision, for local sentiment has always been in favor of a wide use of licenses. In 1887, for instance, we find an ordinance passed, providing for forty-six licenses and covering all occupations of the city, from the merchant, the doctor and dentist to the peddler and corn doctor.¹¹ Some of these licenses were as follows:

Attorneys at law.....	\$10 a year
Corn doctors	\$2 a day
Dentists	\$10 a year
Doctors	\$10 a year
Merchants	\$20 a year
Book Agent	\$1 a day
Lumber Dealer	\$50 a year
Circus	\$300 a day

Twelve corporations were listed for annual license taxes as follows:

American District Telegraph.....	\$25
Electric Light Company	\$100
Express Company	\$100
Gas Company	\$100
Insurance Company	\$25
Oil Tank Company	\$100
Street Railroad Company.....	\$100
Telegraph Company	\$100
Telephone Company	\$100
Water Company	\$100
Street Paving Company	\$100
Railroad Company	\$100

A new city ordinance covering the subject went into effect in 1902.¹² This ordinance extended the list to cover fifty-two enumerated occupations, but removed from the list the ordinary, established businesses and professions such as merchants, lawyers,

¹⁰ *Laws of Kansas*, 1903, ch. 122.

¹¹ City Ordinance. No. 767.

¹² Ordinance No. 2384. Published Dec. 24, 1903.

doctors, etc. Instead of twelve corporations, only six were enumerated, and with the following licenses:

Insurance company.....	\$25 a year
Gas company	150 a year
Electric light company.....	150 a year
Electric light and heating company, for heating.....	75 a year
Telegraph company	100 a year
Express company	100 a year

Peddlers and solicitors were divided into nine classes with licenses to suit, but with the proviso, "nothing in this ordinance shall require payment of license tax by persons selling only hay, grain, vegetables, meats and articles of their own raising, or by the residents of the city on articles of their own manufacture."

The "dog tax" is one of the most successful licenses in operation. A dog officer is chosen by the mayor and council, on a salary of \$60 a month, to enforce the ordinance.¹³ Dogs must be registered with the city clerk, the license tax being two dollars a year for male dogs, and seven dollars a year for female dogs. This brings in to the city from ten hundred to fifteen hundred dollars a year, net revenue, besides tending to eliminate the mongrel breed of dogs.

Special Assessment.—The expense of sewers and street and alley paving is met by special assessment. This is levied on a "benefit district," that is, on abutting property to the distance of three hundred feet, but in no case does the benefit district extend more than half way to the street or public highway parallel with and next to the public grounds to be improved. The special assessment tax is certified to by the city clerk, and collected by the county treasurer along with the regular taxes. The city sells "internal improvement" bonds to cover the cost of the special improvement, and the property owner benefited pays a special assessment tax annually for a series of years—usually ten—sufficient to retire these bonds. The unusually wide streets in some parts of Topeka have made the burden of paving very heavy as shown in a preceding paragraph. Areas at street intersections are paved at the city's expense.

¹³ Ordinance No. 2468. Published Dec. 23, 1903.

Taxation.—Direct taxation forms by far the most important source of the city's revenue. Methods of assessment and levy have been described before.

The table below is interesting as furnishing a complete exhibition of the city's assessment since 1862, with absolute and relative amounts for realty, personalty, and railroads:

TOTAL ASSESSMENT OF TOPEKA, 1862-1904.
(From manuscript records in county treasurer's office.)

Year.	Realty.	Personalty.	Railroads.	Total.
1904	\$8,413,688	\$2,309,390	\$501,834	\$11,224,912
1903	8,299,745	2,317,975	491,457	11,109,177
1902	8,150,325	1,981,670	399,947	10,531,942
1901	7,917,530	1,882,405	374,230	10,174,165
1900	7,699,585	1,768,525	363,035	9,831,145
1899	7,082,335	1,454,240	351,067	8,887,642
1898	7,121,120	1,352,920	381,754	8,855,794
1897	7,850,390	1,354,580	359,934	9,564,894
1896	7,819,565	1,401,235	393,963	9,615,203
1895				
1894	7,568,235	1,611,590	359,737	9,539,563
1893	7,272,700	1,676,900	379,753	9,329,354
1892	7,226,370	1,669,615	314,756	9,210,741
1891	7,758,945	1,987,845	309,561	10,056,351
1890	7,682,460	2,040,945	353,655	10,077,060
1889	6,165,055	2,709,620	354,164	9,228,839
1888	5,839,645	2,544,486	351,648	8,735,779
1887	5,154,719	1,794,481	320,817	7,270,017
1886	4,760,068	1,474,153	312,857	6,547,078
1885	4,402,565	1,251,157	276,201	5,929,923
1884	4,234,235	1,147,299	235,657	5,617,191
1883	3,585,992	970,106	180,219	4,716,317
1882	3,271,804	821,820	109,379	4,203,003
1881	2,677,435	608,230	124,770	3,410,435
1880	2,412,049	489,602	102,968	3,004,639
1879	1,765,205	487,356	85,734	2,338,295
1878	1,667,756	699,069	58,661	2,425,486
1877	1,864,723	664,863	42,371	2,571,957
1876	1,838,242	717,817	40,669	2,596,728
1875	1,692,799	775,914		2,468,713
1874	1,668,719	817,893	R. R. included in "Personalty" prior to 1876.	2,486,602
1873	1,789,342	1,091,752		2,881,094
1872	1,823,504	1,210,544		3,034,048
1871	1,685,596	946,354		2,631,950
Township and City.				
1870	632,904	41,076		673,980
1869	701,275	85,651		786,926
1868	311,705	66,584		378,289
	Realty.	Personalty.	Town Lots.	
1867	396,255	459,120	632,335	1,487,710
1866	346,490	350,524	545,171	1,242,185
1865	237,636	161,710	286,825	686,171
1864	229,676	80,296	280,425	600,399
1863	229,676	63,174	250,783	543,635
1862	170,968	51,702	230,796	453,466

There was formerly a limit to the levy, which was two per cent., but this excluded levies for purposes of schools, water-works, sewers, special improvements and paving street cross-

ings. Hence it was a fictitious limit. At present, the levy limit, according to the city charter is,

General revenue	6 mills
General improvement	6 mills
Interest	no limit
Water	4 mills
Judgments	1 mill

Omitting school levy and special assessment, which are distinct items in municipal bookkeeping, the city clerk's records show the following tax levy:

TOPEKA, TAX LEVY, 1893-1904, RATE IN MILLS

Purpose	1893	1894	1895	1896	1897	1898	1899	1900	1901	1903	1904
General revenue....	6	6	6	6	6	6	6	6	6	6	6
General improve- ment	5	5	5.5	5	5	5.5	6	6	6	6	6
Interest	2.1	2.1	2.1	2	2	2	2	2	1.5	2	2
Water	1.6	1.6	1.6	1.6	1.75	2	2	1	1	1	1.5
Library	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
Judgment	.5	.5	2.5	2.5	1						
Internal improve- ment bonds (city's share)	4.9	4.9	5	4.55	1.65	1.4	1	1	1	1.5	2
Internal imp. inter- est (city's share)						.4	.5	.5	.5	1	1
Sinking fund					1	1.3	.5				
Parks					1	1.2	.5		.5	.5	1
Total	20.6	20.6	23.2	22.15	18	19	18.5	17	17	18.5	20

The ordinary tax payer of Topeka, that is, one who is free from any special assessment burden, finds himself taxed for the following purposes, and at the following rates:

TAX LEVY FOR ALL PURPOSES IN TOPEKA, SPECIAL ASSESSMENT ALONE OMITTED. RATE IN MILLS.

Year.	State.	County.					Total county and state.	City.				Grand total.
		General revenue.	E. R. interest, etc.	Poor.	Fund and interest.	Improvements.		General revenue.	Library.	School.	Total city.	
1892.....	3.80	3.50	1.50	.....	.20	.....	9.00	19.80	.50	9.80	30.10	39.10
1894.....	3.80	4	1.00	1	.50	.4	11.30	20.10	.80	10.	30.90	41.90
1895.....	4.20	4.	1.50	1	.60	.5	11.80	22.70	.50	10.	33.30	45.
1896.....	3.90	4.	2.20	1	.10	.8	12.	21.65	.50	10.	32.15	44.15
1897.....	3.70	4.	3.20	1	.20	.9	13.	18.50	.50	10.	29.	42.
1898.....	3.90	4.	3.20	1	.20	.9	13.20	18.50	.50	11.	30.	43.20
1899.....	5.25	4.	2.00	1	.35	.8	14.	18.	.50	16.	34.50	48.50
1900.....	4.90	3.50	2.25	1	.50	.85	13.	16.50	.50	16.	33.	46.
1901.....	5.30	4.	2.40	1	.10	2.8	15.50	16.50	.50	15.50	32.50	48.

A poll tax or road tax, calling on each man for three dollars in money or two days' labor, is still partially enforced. In 1892 this tax yielded \$8,513 in cash and the labor of 257 men. In 1893 it yielded \$6,949 in cash.

MUNICIPAL DEBT

As the law is interpreted today, there are practically no limitations on the city's debt. The city early had a small floating indebtedness, for in January, 1859, the city council provided for an issue of \$500, city scrip.¹⁴ But a bonded debt soon became the rule, for the city's credit was always jealously guarded and kept equal to that of the best private corporations. In 1899 a block of city bonds sold as low as $3\frac{1}{2}$ per cent. Straight 20-year, 4 per cent. bonds recently sold at a fair premium. At times of a tight money market the city has issued a few bonds, in recent years, at $4\frac{1}{2}$ per cent. and received a very liberal premium. Some special improvement bonds were issued at 5 per cent. and sold for premium enough to make the rate $4\frac{1}{2}$ per cent. The bonded debt of the city is shown below:

BONDED INDEBTEDNESS OF CITY AT LARGE

Date of bond	Object	Amount	Interest	Due
July 2, 1886	Refund	\$14,000	5 pr ct.	July 2, '06
July 20, 1885	Refund	14,000	6	July 20, '06
July 15, 1890	Fund.	79,000	5	July 15, '10
April 20, 1886	Coal Pros.	12,000	6	April 20, '06
August 10, 1891	Refund (R. R. aid.)	100,000	.....	Aug. 10, '11
November 3, 1893	Refund	74,000	5	Nov. 3, '13
September 1, 1895	Refund	3,500	5	Sept. 1, '15
January 16, 1899	Refund	13,000	$3\frac{1}{2}$	Jan. 16, '19
January 1, 1900	City Hall	60,000	4	Jan. 1, '20
June 1, 1901	R. R. aid (A., T & S.F.)	59,000	4	June 1, '31
Total		\$428,500		

¹⁴ Giles, p. 126 ff.

INTERNAL IMPROVEMENT BONDS

	Streets	Alley	Sewer
Total outstanding April 1, 1898.....	\$87,807	\$9,229	\$44,864
Issued, 1899-1900	127,034		43,549
Issued, 1900-1901	88,605		
Issued, 1901-1902	156,702		
Total outstanding April 1, 1902, \$386,378.			

The sinking fund is not invested, but is kept on deposit with local banks, where it draws 2 per cent. interest.

MUNICIPAL BUDGET AND ACCOUNTING

The fiscal year begins April 1. Estimates are made by heads of departments, and these estimates go before the city council. Fixed items, such as salaries, are allowed without debate, but responsibility for flexible charges rests with the council and mayor. Appropriations are made for one month.

In accounting, the fund system is used, transfers often being made from one fund to another to meet unforeseen shortages. As yet no logical, and, it may be truthfully added, no intelligible system of bookkeeping has been used. The city treasurer, who is also school treasurer, is the nominal custodian of city funds. He gives a bond of \$50,000. He receives all taxes, fees, licenses, etc., giving duplicate receipt, one of which goes to the city clerk. As a matter of fact, the county treasurer has books open for all city taxes, and he in turn pays these over to the city treasurer. The city clerk keeps accounts with the city and county, and exercises the power of audit. The city funds are largely kept on deposit with the city banks furnishing proper security, and 2 per cent. interest is paid to the city. The city's warrants or checks are payable by any bank in the city, or by the city treasurer.

The most pressing need of the city's fiscal system is a clear, comprehensible method of accounting, that shall clearly indicate the exact amount and source of all revenues, the precise expenditures for each separate department (outlay for maintenance and outlay for construction completely differentiated), and some definite allowance for depreciation of city property. This condition is far from being realized at present.

APPENDIX A.

PERCENTAGE OF ASSESSED VALUATION OF EACH CLASS OF PROPERTY,
1861 TO 1900.

Year	Lands	Town lots	Personal	Railroads	Year	Lands	Town lots	Personal	Railroads
1861.....	49.90	50.10	.....	.....	1881.....	53.47	13.17	20.17	13.19
1862.....	72.43	16.46	11.11	.....	1882.....	52.38	14.08	20.50	13.04
1863.....	73.05	13.93	13.02	.....	1883.....	49.50	13.61	23.55	13.34
1864.....	62.89	17.27	20.00	.....	1884.....	49.50	14.68	23.80	12.02
1865.....	50.76	19.87	29.37	.....	1885.....	49.50	15.49	22.78	12.23
1866.....	54.08	19.38	26.54	.....	1886.....	51.81	16.95	20.00	11.24
1867.....	51.03	21.48	27.49	.....	1887.....	49.02	18.21	19.57	13.20
1868.....	51.87	18.01	30.12	.....	1888.....	48.07	21.00	15.90	15.03
1869.....	51.54	18.15	30.31	.....	1889.....	48.08	21.18	14.74	16.00
1870.....	53.47	17.78	28.75	.....	1890.....	48.50	20.86	14.00	16.64
1871.....	54.39	16.40	29.30	.....	1891.....	49.75	21.69	13.74	14.82
1872.....	58.13	16.03	25.84	.....	1892.....	51.28	19.57	13.79	15.36
1873.....	57.90	16.57	17.79	7.85	1893.....	50.01	18.80	13.36	17.83
1874.....	56.30	14.93	17.24	11.42	1894.....	51.80	18.43	12.14	17.63
1875.....	59.20	14.74	15.97	11.00	1895.....	52.63	18.80	10.62	17.95
1876.....	57.12	13.49	17.36	12.10	1896.....	51.81	18.38	11.21	18.60
1877.....	57.14	13.46	18.00	11.40	1897.....	51.82	18.20	11.73	18.25
1878.....	53.13	12.14	18.58	11.25	1898.....	50.59	17.57	13.92	17.92
1879.....	57.47	12.30	19.00	11.23	1899.....	50.11	17.12	14.99	17.78
1880.....	54.41	12.98	19.84	12.77	1900.....	48.06	17.95	16.46	17.53

NOTE.—In 1861 personal property is included in town lots. Up to 1873 railroads are included in personal property.

APPENDIX Aa.
ASSESSED VALUATIONS OF REAL AND PERSONAL PROPERTY
OTHER STATES.¹
 (Percentage of Each Class of Property.)

Year	Real Estate		Personal Property	
	New York	Illinois	New York	Illinois
	Per cent	Per cent	Per cent	Per cent
1867.....	74.61	.....	25.39	.....
1868.....	77.64	.....	22.36	.....
1869.....	76.43	.....	23.57	.....
1870.....	77.47	.....	22.53	.....
1871.....	75.82	.....	24.18	.....
1872.....	78.00	.....	21.40	.....
1873.....	79.13	70.89	20.87	29.11
1874.....	79.78	74.22	20.22	25.78
1875.....	81.11	75.34	18.89	24.63
1876.....	86.96	77.25	13.04	22.75
1877.....	87.94	78.81	12.06	21.19
1878.....	87.44	79.54	12.06	20.46
1879.....	86.75	79.53	13.25	20.47
1880.....	87.78	77.85	12.22	22.15
1881.....	85.63	78.02	14.37	21.98
1882.....	87.40	77.99	12.60	22.01
1883.....	89.04	77.94	10.96	22.06
1884.....	90.06	78.51	9.94	21.49
1885.....	89.66	79.01	10.31	20.99
1886.....	89.93	79.77	10.07	20.23
1887.....	90.00	79.30	10.00	20.70
1888.....	90.00	79.82	10.00	20.18
1889.....	90.07	78.19	9.93	21.81
1890.....	89.54	78.46	10.46	21.54
1891.....	89.89	79.98	10.11	20.02
1892.....	89.70	79.76	10.30	20.24
1893.....	88.06	80.87	11.94	19.13
1894.....	87.23	78.78	12.77	21.22
1895.....	88.79	79.86	11.21	20.14
1896.....	89.48	80.18	10.52	19.82
1897.....	89.67	80.96	10.33	19.04
1898.....	88.80	80.42	11.20	19.58
1899.....	86.95	78.55	13.05	21.45
1900.....	88.10	.....	11.90	.....
1901.....	88.30	.....	11.70	.....
1902.....	89.83	.....	10.17	.....

¹ Sources of table:

For New York—Report of State Board of Tax Com., 1902, p. 42.

For Illinois—Auditors' Reports, 1883, table 33; 1890, table 27; 1900, table 29.

APPENDIX B

RECEIPTS AND EXPENDITURES FOR COMMON SCHOOLS.

From Biennial Reports of State Superintendent of Public Instruction.

Year	Balance on hand	School tax	School fund	Bonds and other sources	Total receipts	Total expenditures	Per capita exp'nse
1890.....	\$550,986 90	\$3,608,482 35	\$400,352 79	\$409,249 56	\$4,969,071 60	\$4,390,472 94	\$3 07
1900.....	600,168 32	3,897,873 10	421,133 94	358,526 75	5,277,702 11	4,622,363 76	3 14
1901.....	655,338 89	3,850,567 15	387,561 41	345,613 36	5,238,970 81	4,566,209 53	3 04

APPENDIX C.

MORTGAGE STATISTICS FOR 1890 (11TH U. S. CENSUS).

State	Total number	Total Amount	On Acres		On Lots	
			Number	Amount	Number	Amount
Kansas.....	298,884	\$243,146,826	203,306	\$174,720,071	95,578	\$68,426,755
Nebraska....	155,377	132,902,322	107,105	90,506,968	48,202	42,395,354
Missouri.....	192,028	214,609,772	108,161	101,718,625	89,867	112,891,147
Colorado.....	54,600	85,058,793	20,484	30,195,056	34,116	54,863,737

FARM MORTGAGES IN KANSAS COMPARED WITH UNITED STATES AS A WHOLE.
(Per Cent of Acres Incumbered Each Year, 1886 to 1890.)

	1886	1887	1888	1889	1890
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Kansas	60.38	68.92	72.70	70.29	60.32
United States.....	29.28	29.22	29.16	29.14	28.86

APPENDIX D.

RECEIPTS AND DISBURSEMENTS, 1861-1902.

(From State Treasurers' Reports.)

Year	Receipts including transfers.	Disbursements including transfers.	Balances	Year	Receipts including transfers	Disbursements including transfers.	Balances
1861	\$46,735	\$46,735	-----	1882	\$2,033,054	\$1,847,644	\$644,324
1862	47,662	47,662	-----	1883	1,852,271	1,638,163	838,432
1863	179,753	168,521	\$11,232	1884	2,402,944	2,486,864	754,512
1864	262,534	231,657	42,129	1885	2,394,715	2,403,877	745,350
1865	180,920	195,971	26,079	1886	3,029,496	3,187,573	584,273
1866	371,771	368,919	28,931	1887	2,779,606	2,932,501	431,378
1867	510,347	503,696	35,612	1888	3,048,010	3,154,506	324,882
1868	753,715	711,218	60,109	1889	3,000,356	2,995,493	338,746
1869	1,120,803	1,132,821	48,091	1890	3,109,837	2,733,444	715,138
1870	1,359,653	1,347,397	60,347	1891	3,042,986	5,296,622	461,502
1871	1,047,398	964,228	143,517	1892	2,702,769	2,437,109	727,163
1872	1,295,355	1,298,228	140,645	1893	2,790,571	2,622,193	895,540
1873	1,308,821	1,246,180	208,286	1894	2,445,796	2,499,010	842,336
1874	1,011,068	991,473	222,880	1895	2,578,824	2,710,235	710,415
1875	956,738	1,055,374	123,745	1896	2,454,252	2,560,138	604,529
1876	1,222,088	1,099,716	246,117	1897	2,432,624	2,674,127	463,026
1877	629,229	496,299	379,047	1898	2,721,209	2,672,083	412,152
1878	1,263,182	1,329,418	312,811	1899	2,939,385	2,853,087	498,450
1879	1,344,779	1,250,199	407,391	1900	3,920,907	3,908,646	510,711
1880	1,610,674	1,573,367	444,698	1901	3,693,935	3,627,021	577,626
1881	1,691,340	1,677,124	458,914	1902	3,595,350	3,545,609	627,367

APPENDIX Da.

TOTAL ASSESSED VALUATIONS, AMOUNT OF STATE TAX LEVY AND RATE IN MILLS.

(From State Treasurers' Reports).

Year	Assessed valuation	Levy	Rate	Year	Assessed valuation	Levy	Rate
1861.....	\$24,737,363	\$74,234	4	1884....	237,020,391	1,066,592	4½
1862.....	19,285,749	115,737	8	1885....	248,846,811	1,032,714	4 1/10
1863.....	25,460,499	152,763	7	1886....	277,113,323	1,136,134	4 1/10
1864.....	30,502,791	182,585	7	1887....	310,871,447	1,274,573	4 1/10
1865.....	36,120,945	216,757	7	1888....	363,248,333	1,448,318	4 1/10
1866.....	50,439,645	252,201	6	1889....	360,815,073	1,515,423	4 1/10
1867.....	56,276,390	281,382	6	1890....	348,459,944	1,490,955	4½
1868.....	66,949,160	435,408	6½	1891....	342,632,407	1,353,398	3 1/10
1869.....	76,383,657	763,837	10	1892....	342,682,846	1,356,571	3 1/10
1870.....	92,528,100	809,621	8½	1893....	366,621,818	1,858,060	3 1/10
1871.....	108,753,075	652,621	6	1894....	337,501,722	1,816,258	3 1/10
1872.....	127,690,687	1,085,373	8½	1895....	329,939,031	1,402,240	4½
1873.....	125,684,177	754,105	6	1896....	321,216,938	1,865,171	4½
1874.....	128,906,320	773,439	6	1897....	325,370,232	1,533,954	4 1/10
1875.....	121,544,344	729,266	6	1898....	325,889,747	1,346,126	4 1/10
1876.....	133,832,316	736,078	5½	1899....	327,165,530	1,799,409	5½
1877.....	137,480,530	756,138	5½	1900....	323,729,008	1,807,898	5½
1878.....	138,698,811	762,843	5½	1901....	363,156,045	1,997,304	5½
1879.....	144,930,280	942,046	5½	1902....	363,163,630	1,997,354	5½
1880.....	160,570,761	883,139	5½				
1881.....	170,813,373	854,066	5				
1882.....	186,128,139	837,576	4½				
1883....	203,184,489	873,693	4 1/10				

NOTE.—The assessed valuation is about one-fifth of actual value at the present time

APPENDIX E.

PER CAPITA NET DEBT, MUNICIPAL, STATE, AND UNITED STATES.

Year.	Municipal	State	United States
1873.....	\$22 69	\$2.01	\$50 52
1874.....	22 84	2.07	49.17
1875.....	.....	2.18	47.53
1876.....	.....	1.71	45.06
1877.....	.....	1.66	43.56
1878.....	19 30	1.55	42.01
1879.....	.....	1.28	40.87
1880.....	14 05	1.07	38.27
1881.....	.....	1.08	35.46
1882.....	13 57	.99	31.91
1883.....	.....	.82	28.66
1884.....	14 05	.66	26.20
1885.....	.....	.48	24.50
1886.....	12 42	.59	22.34
1887.....	.....	.52	20.08
1888.....	20 98	.55	17.72
1889.....	.....	.55	15.92
1890.....	25 57	.56	14.22
1891.....	.....	.57	13.34
1892.....	26 76	.57	12.98
1893.....	.....	.58	12.64
1894.....	27 36	.59	13.80
1895.....	.....	.57	13.08
1896.....	35 63	.57	13.60
1897.....	.....	.46	13.78
1898.....	23 21	.45	14.06
1899.....	.....	.48	15.55
1900.....	22 03	.47	14.52
1901.....	.....	.42	13.45
1902.....	21 31	.41	12.27

APPENDIX F

MUNICIPAL DEBTS, THEIR GROWTH AND TOTAL AMOUNT.

Year	Railroad aid bonds	Refunding bonds	All bonds issued	Total out- standing debt (net)
1874.....	\$358,500	.....	\$761,610	\$12,677,750
1875.....	39,600	.....	189,088	.....
1876.....	61,900	\$120,000	385,600	.....
1877-8.....	646,000	72,867	772,717	13,473,198
1879-80.....	1,067,540	.....	2,053,672	13,998,604
1881-2.....	589,485	1,579,800	2,248,125	14,472,019
1883-4.....	239,500	1,339,234	1,690,732	15,595,126
1885-6.....	961,000	1,598,529	3,172,890	17,473,347
1887-8.....	8,544,551	2,378,750	13,838,062	30,733,935
1889-90.....	804,250	3,419,030	7,566,689	36,491,660
1891-2.....	315,000	1,154,240	3,271,881	37,075,740
1893-4.....	56,500	299,661	1,501,028	36,805,569
1895-6.....	.....	712,900	1,719,677	34,604,246
1897-8.....	200,000	1,074,000	2,104,552	32,276,339
1899-1900.....	31,500	4,509,140	6,401,338	32,396,799
1901-2.....	59,000	2,396,602	2,724,100	32,614,900

APPENDIX G.
RAILROAD MILEAGE AND SUBSIDY TABLE.

Year.	Mileage	Increase	Subsidy
1865	55		\$750,000 00
1866	300	245	450,000 00
1867	540	240	100,000 00
1868	600	60	368,000 00
1869	900	300	1,109,000 00
1870	1,469	569	1,189,000 00
1871	1,770	301	830,000 00
1872	2,039	269	950,000 00
1873	2,063	24	249,000 00
1874	1,899	(224)	358,500 00
1875	2,000	161	39,600 00
1876	2,129	129	61,500 00
1877	2,199	70	646,000 00
1878	2,302	103	
1879	2,444	142	1,067,540 00
1880	3,478	1,034	
1881	3,701	223	589,485 00
1882	3,786	85	
1883	3,870	84	239,500 00
1884	4,020	150	
1885	4,181	161	961,000 00
1886	4,522	341	
1887	6,212	1,690	3,544,550 50
1888	8,312	2,100	
1889	8,721	409	304,250 00
1890	8,763	43	
1891	8,853	90	315,000 00
1892	8,845	(8)	
1893	8,840	(5)	56,500 00
1894	8,832	(8)	
1895	8,829	(3)	0
1896	8,829	0	
1897	8,902	(77)	200,000 00
1898	8,759	(143)	
1899	8,690	(69)	31,500 00
1900	8,717	27	
1901	8,710	(7)	59,000 00
1902	8,754	44	

NOTE.—Numbers in the "increase" column, enclosed in parenthesis indicate a decrease.

This table is compiled from the reports of the Board of Railroad Commissioners and of the state auditors.

APPENDIX H.

BANKING: DEPOSITS, RESERVE, ETC.

ALL STATE AND PRIVATE BANKS, 1891-1902

Date of Call	No. of banks.	Total deposits	Legal reserve	Reserve per cent
Oct., 1891.....	414	\$15,773,439	\$5,477,272	34.09
Jan., 1892.....	439	17,377,978	6,703,668	38.60
June, 1892.....	444	18,445,945	7,341,836	39.80
Jan., 1893.....	445	21,139,913	7,449,205	35.24
June, 1893.....	434	19,219,526	6,803,618	35.40
Jan., 1894.....	414	15,427,494	6,194,706	40.15
July, 1894.....	410	16,755,870	5,424,289	44.30
Jan., 1895.....	405	17,112,465	6,575,501	38.42
July, 1895.....	408	16,587,435	6,257,294	37.54
Feb., 1896.....	396	15,526,832	6,023,529	38.80
Sept., 1896.....	392	15,220,107	6,439,657	42.31
Mar., 1897.....	381	16,975,502	6,656,846	41.67
Oct., 1897.....	383	22,004,874	11,072,746	50.32
April, 1898.....	365	22,318,165	10,466,694	46.89
Oct., 1898.....	366	22,992,900	10,463,441	45.50
Mar., 1899.....	364	23,041,694	10,174,655	44.15
Sept., 1899.....	383	25,956,271	12,074,189	46.51
Feb., 1900.....	387	27,125,275	11,274,840	41.56
Sept., 1900.....	388	31,626,385	16,285,287	51.49
Feb., 1901.....	395	33,780,873	16,057,234	47.56
Sept., 1901.....	422	43,000,004	22,879,490	53.20
Mar., 1902.....	437	39,830,429	17,060,652	42.83
Sept., 1902.....	462	40,059,291	17,008,196	42.45

APPENDIX I.

VALUE OF STATE PROPERTY, 1902.

(Estimates made by Auditor and Officers in Charge.)

Osawatomi Hospital	\$800,300
Topeka Hospital	791,100
Parsons Hospital	118,000
Industrial School for Boys.....	186,050
Industrial School for Girls.....	115,500
School for Feeble-minded.....	158,900
Soldiers' Orphans Home.....	183,000
School for the Blind.....	156,250
School for the Deaf and Dumb.....	272,965
State University	1,225,000
Agricultural College	1,083,000
Agricultural College Experiment Station.....	74,080
State Normal	570,000
Western Branch Normal.....	89,308
Industrial School, Quindaro.....	21,500
Penitentiary	1,594,500
Industrial Reformatory	510,545
State Soldiers' Home	108,000

Mother Bickerdyke Home.....	17,250
Forestry Stations	5,415
Silk Stations	2,500
Executive Residence	35,000
Capitol heating and lighting plant.....	50,000
Capitol	3,000,000

NOTE:—This includes 1,250 acres of land; \$293,375 of libraries; \$209,730 of museums; \$901,180 of endowments (schools); \$38,450 of live stock.

APPENDIX J.

SALARIES OF STATE OFFICERS.

Governor	\$3,000
Secretary of State	2,500
Auditor	2,500
Treasurer	2,500
Attorney General	2,500
Superintendent of Public Instruction.....	2,000
Justices of Supreme Court (3), each.....	3,000
Judges of Appellate Court (6), each.....	2,500
Judges of District Court (29), each.....	2,500
Railroad Commissioners (3), each	2,500
Bank Commissioner	2,500
State Architect	2,500
Superintendent of Insurance.....	2,000
Secretary of Board of Agriculture.....	2,000
Adjutant General	1,500
Commissioner of Labor Statistics.....	1,500

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1. KANSAS DOCUMENTS.

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Secretary of State (biennial),

Attorney-General (biennial),

Superintendent of Public Instruction (biennial).

Board of Railroad Commissioners (annual),

Bank Commissioner (biennial),

Superintendent of Insurance (biennial),

Secretary of Board of Agriculture (biennial),

Adjutant-General (biennial),

Commissioner of Labor and Industry (biennial).

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B. Special reports.

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(2) Report of the Joint Legislative Committee, appointed to investigate the affairs and offices of the auditor and treasurer. Topeka, 1870.

- (3) Assessment of railroad property in Kansas, 1879. Topeka, 1879.
 - (4) Report of the State Auditor, made upon a request from the Ways and Means Committee of the Senate and House of Representatives for information concerning amounts due counties for maintenance of destitute insane persons, and amounts due the state from the various counties for back taxes. Topeka, 1899.
 - (5) Kansas State Tax Commission Report. Topeka, 1901.
 - (6) Proceedings of the Court of Impeachment for the trial of J. E. Hayes, Treasurer of State. Topeka, 1874.
- C. Journals of the Council and House of Representatives.
Kansas Territory, 1855 to 1861.
Journal of the Senate and House of Representatives of Kansas, 1861 and following. Now issued biennially, and also after each special session of the legislature.
- These contain rules and joint rules pertaining to committees and general budgetary legislation, special reports of legislative committees bearing on financial matters, and the title and history of every bill introduced. Since comparatively few bills ever become laws, this source (aside from its committee reports) is chiefly important in showing the tendency of legislation at any one period.
- D. Laws of Kansas Territory, 1855 to 1861.
Laws of Kansas, 1861 and following.

This includes the Session Laws, and also the
General Statutes of 1868.
General Statutes of 1889.
General Statutes of 1901.

This source reveals all the tax legislation ever enacted in Kansas. The General Statutes also contain, for convenient reference, the treaty ceding Louisiana to the United States, the treaty between France and Spain, the Organic Act, the Constitution of Kansas (including Ordinance, Schedule, and Resolutions), the act of admission (congress), and the act of admission (Kansas legislature).

E. Kansas Supreme Court Reports.

Reports of decisions are here given, touching upon the meaning of the various financial laws whose constitutionality was called in question.

F. Kansas State Historical Society collections.

This is a collection of miscellaneous source material pertaining especially to the territorial and early state period.

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ECONOMICS AND POLITICAL SCIENCE SERIES, VOL. 5, NO. 2, PP. 179-294.

THE LABOR ARGUMENT IN THE AMERICAN
PROTECTIVE TARIFF DISCUSSION

BY

GEORGE BENJAMIN MANGOLD

Associate Director St. Louis School of Philanthropy

A THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
UNIVERSITY OF WISCONSIN
1906

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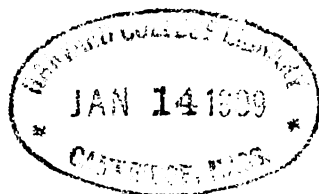
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PREFACE

The purpose of this paper is to indicate the labor difficulties involved in the early development of our manufacturing industries and the plans suggested for their solution; to show how these difficulties affected the tariff problem; to analyze the character of the labor argument employed in favor of the tariff; to picture the social and political conditions giving rise to it; to show how a well-differentiated laboring class affected the nature of the argument advanced by both protectionists and free-traders, and to trace the development of the pauper labor argument for protection.

THE LABOR ARGUMENT IN THE AMERICAN PROTECTIVE TARIFF DISCUSSION

CHAPTER I

INTRODUCTORY

To understand the importance and intricacies of the labor argument as first employed, it is necessary to review briefly the character of early American industry. The adoption of the constitution of the United States was not only a self-conscious movement toward greater political security but was in part an effort to ameliorate the depressing economic and industrial conditions which prevailed throughout a large part of the country. Commercial unrest was, in fact, one of the chief causes contributing to the formation of the constitution. Under the new government greater industrial stability was hoped for. It is well known that the determined stand of Boston mechanics for the constitution, because they believed that under it they would receive a greater degree of protection against foreign goods, contributed vitally to the ratification of the constitution by the state of Massachusetts.

Agriculture was at that time the predominant American industry. It was the occupation of the great majority of Americans, and by far the most important source of wealth. In 1790 only 3.35 per cent. of the population lived in cities of 8,000 or more, thus showing the comparative unimportance of cities, and the great preponderance of agricultural industries. Even as late as 1820 more than 80 per cent. of our people were engaged in agriculture. Wealth was not concentrated in cities, and

large numbers of the rich owed their wealth to the possession of vast landed estates. In fact, the men of wealth in our national legislature were quite uniformly members of the landed classes, and our early legislation cannot be understood apart from this important fact. Physiocratic ideas had exercised a profound influence upon American thought and the importance of agriculture was still largely over-estimated. Many men believing that our economic welfare would thus be best preserved, hoped we would remain an agricultural country. Others looked with trepidation upon the observable signs of a comparative increase of manufacturing interests. Jefferson himself, a large land holder, held, in the main, to the old notions, and his influence was potent in the councils of the nation.

Commerce, however, was not a negligible fraction of our industrial interests. Its importance was increasing very rapidly, and protection was early extended to it; for American vessels only were allowed to engage in our coasting trade. An impetus was thus given to the shipping interests and an additional effort was made to increase the tonnage engaged in foreign trade. This was conspicuously successful, as the following facts indicate: in 1808 the figures were 14,000 and 110,000, respectively, for the tonnage of British and American ships sailing between the two countries, against 72,000 for England and 21,000 for America, in 1789.¹ Continual warfare in Europe and the injury which it inflicted on the shipping interests of the various countries gave America an advantage of tremendous value, and in 1807 her ship tonnage had mounted to the magnificent sum of 1,089,876.

Napoleon's attempt to destroy British commerce and the political measures which it entailed, both here and abroad, for a time seriously crippled our thriving trade, while the war of 1812 was another serious and distinct blow. A gradual recovery from this depression was followed by a decline in 1821-22, but by 1823 the same level was attained which prevailed in 1811, the tonnage for the year amounting to 775,271.²

¹ Gibbins, H. de B., *Economic and Industrial Progress of the Century*, 55.

² *Annals of Congress*, 42: 2263.

Our commercial interests had plainly assumed considerable importance. In 1820 as many as 80,000 American seamen were employed in our carrying trade. Our merchants were the dominating influence in a number of our seaports, such as New York, Boston, and Charleston, which were not only centers of political activity, but controlled the politics of their respective states. This industry wielded a political power far in excess of its proportionate importance among the principal industries of the nation and the shaping of our economic policy was to a considerable extent contingent upon its attitude.

The character of our early export trade has an extensive bearing upon the outcome of our protective policy and indicates some of the causes for sectional differences on the subject. Cotton was one of the principal exported articles. The capital employed in its cultivation in the United States was about \$80,000,000 in 1801, and was continually increasing.³ About 100,000 persons were employed in growing it or depended upon it. There were about 900,000 slaves in the United States at that time and the cotton-gin had come into use, so that a rapid extension of cotton culture was practically assured. Tobacco and rice were southern products. Indian corn was raised both in the South and in the North, while meat and lumber were largely confined to the latter section. Our average yearly export of grain and flour during the period 1790-94 was 1,421,335 barrels; for the period 1821-23 it was only 1,177,949 barrels. The exports of raw cotton rose from a value of \$5,000,000 in 1800 to \$20,000,000 in 1823. In the year 1800 our total exports amounted to \$47,473,000 or about \$8.00 per capita. In 1820 they were \$51,683,000 or virtually \$5.00 per capita, while the figures for 1823 were \$47,155,711 and \$4.00 respectively.⁴ There had been waves of increase and decline, commerce having suffered from the Embargo Act, the War of 1812, and the crisis of 1819-20, but the general tendency seemed unfavorable. During the year 1820 manufactures to the amount of \$3,000,000 were exported, but the raw materials exported, exclusive of cot-

³ Bishop, *History of Manufactures*, 2: 88.

⁴ *Ann. of Cong.*, 42: 2125.

ton and wool, were less by \$18,000,000 than their aggregate for 1800. It was claimed that this loss fell upon the northern and middle states, while the South alone was gaining. Undoubtedly there was reason in this complaint; besides this, many men in the North believed the South to have an advantage in its slave labor. The large foreign trade of the South, on the other hand, strengthened the commercial interests of both sections to such an extent that both desired its expansion. It was thus with increasing interest that the North observed the growth of manufacturing interests and the application of artificial means to achieve their further advancement.

Manufacturing, however, concerns us most, as it was in connection with this rapidly rising branch of industry that the tariff was largely discussed. It was here that the labor problem first became acute and demanded solution. We were far behind England in the value of our products; yet we manufactured flour, distilled spirits, linen goods, tanned leather, molasses, iron products, ships, etc. Hats were an important article of manufacture and the wool used was largely of domestic growth. The material for glass could be secured in large quantities, but considerable manual labor, numbers of skilled workmen and large capitals were required for the successful pursuit of the glass industry.⁵ In all of these particulars the nation was but inadequately furnished. Flour and spirits were manufactured in the same regions that actually produced the supply of grain. There was as yet no system of internal improvements and few facilities for transportation, hence bulky matter was usually transformed into finished products before shipment to market. Even then a slight depression of trade or fall in prices necessitated untold hardships to farmers and to the so-called manufacturers. Such conditions eventuated in the Whisky Rebellion and other movements of discontent.

The erection of a cotton mill in Rhode Island in 1791 and the advent of Samuel Slater were portentous events in the history of American manufactures, and hence were important factors in the determination of our subsequent tariff policy. Woolen mills

⁵ Bishop, *History of Manufactures*, 2: ch. 1.

were also erected and strenuous efforts to make them successful were made, but not until the War of 1812 and later was much accomplished by them. Difficulties of various kinds continually arose. Besides this the habits of our people conspired to cause their failure, for the greater portion of all woollen goods used north of the Ohio river were manufactured within the families themselves after the manner of the old domestic system. In fact, as late as 1828, when the tariff on wool and woollens was so largely agitated, this condition was still essentially unchanged. Long after machine production had begun to assume considerable importance in certain industries, the old domestic system by its persistent lingering delayed the advent of a manufacturing era. Despite these facts, considerable advance was being made, as will be subsequently shown.

Having concluded this preliminary statement, let us note the general attitude held toward the development of industry, and its early progress during the time when it was not affected to any appreciable degree by protective legislation. Most of our prominent statesmen, though not entirely free from sectional bias, still believed in a broad national policy. The landed interests, powerful in the nation's councils, naturally emphasized the importance of agriculture, but favored such policies as would conduce to greater general prosperity. This, it was believed, would be enhanced by a parallel development of manufactures along with that of agriculture and commerce. Agriculture would always remain the predominant industry of the nation, but progress along all lines was desired. Even before the adoption of the constitution, Tench Coxe extolled the advantages and resources of America; spoke of her varied sources of wealth, and of the need of systematizing our industry to attain the maximum of advantage; and argued that the three great industries would naturally arise under such conditions and should be properly correlated.⁶ Physiocratic doctrines, however, were not yet dead, and Hamilton, in his report on manufactures, found it necessary to defend manufactures against the charge of inferior

⁶ *Address to Friends of American Manufactures, in Univ. of Pa., Aug. 9, 1787.*
31.

productiveness, and to assert in their favor that they occasioned "a positive augmentation of the produce and revenue of society."

More and more, however, the development of the backward manufacturing industry was viewed with complacency and positive approval. It was argued that we should encourage the manufacture of products necessary for our national defence. If possible we should be independent of foreign nations in this respect. Washington advocated such a policy. Madison, while president, urged similar measures, although originally a free-trader at heart.⁷ He advanced beyond this and deliberately recommended the encouragement of such manufacturing industries as the nation was fitted to carry on with success after they had been established and efficiently pursued.

This broader attitude toward the proper development of American industries found ample expression during the first important struggle over the tariff question in 1816. The lines of political cleavage had not yet definitely separated the North and South into two opposing sections. However, both nationalistic and sectional influences externalized themselves in this contest. Eminent statesmen, such as Calhoun, clung to the idea of national expansion and national greatness, and sectionalism was less prominent than it subsequently became. Hence we have in the following words of Calhoun a clear statement of the national view-point of the men of the earlier generations—a view-point which comprehended the growth of the entire nation along many lines rather than that of particular sections only.⁸ "Neither Agriculture nor Manufacturing nor Commerce, taken separately, is the cause of wealth. It flows from the three combined and cannot exist without each.—Without Commerce industry would have no stimulus; without Manufactures it would be without the means of production; and without Agriculture neither of the others can subsist. When separated entirely and permanently they perish. War in this country produces, to a great extent, that effect and hence the great embarrassment that fol-

⁷ *Messages and Papers of the Presidents*, 1: 567.

⁸ Calhoun, *Works*, 2: 166.

lows in its train. It is admitted by the most strenuous advocates on the other side that no country ought to be dependent upon another for its means of defence;—But what is more necessary to the defence of a country than its currency and finance? Behold the effect of the late war upon them! When our manufactures are grown to a certain perfection, as they soon will be under the fostering care of the Government, we will no longer experience these evils. The farmer will find a ready market for his produce, and what is almost of equal consequence, a certain and cheap supply of all he wants. His prosperity will diffuse itself to every class in the community, and instead of that languor of industry and individual distress now incident to a state of war and suspended commerce, the wealth and vigor of the community will not be materially impaired.”

Thus we get a glimpse of early industry in America. We find the three great industries existing side by side. All are flourishing, but the domestic manufacture of certain imported articles is earnestly desired. More than that, general national development is hoped for, and this desire causes national interest to attach itself to the subject of the tariff and its relations to the manufacturing industries of the nation.

The period immediately following the organization of the new government was not marked by any desire on the part of our national law-makers to interfere extensively with the natural trend of American industry or to give special and artificial encouragement to our manufacturing system, which was then in its infancy. The existence of millions of acres of wild, uncultivated, low-priced land had a tremendous effect in retarding the development of the factory system, and with the agricultural advantages which obtained, it was natural that free labor apart from the farms should be scarce.

The obstacles which manufacturing industries had to face are stated by Alexander Hamilton in his celebrated *Report on Manufactures*.^a The most important one is “dearness of labor.” This, he says, has relation principally to two circumstances:

1. Scarcity of Hands.
2. Greatness of Profit.

^a *American State Papers. Finance*, 1: 123 ff.

“The disparity between some of the most manufacturing parts of Europe and a large proportion of the United States is not so great as is commonly imagined. It is less in regard to artificers and manufacturers than in regard to common laborers. Disparity is diminishing as greater use can be made of machinery. Wages furnish but one of a number of items in the cost of goods. We have an advantage in some of them. Foreign goods pay certain extraordinaries. These cannot be estimated at less than 15 or 20 per cent., and are more than a counterpoise for the real difference in the price of labor.”

In regard to scarcity of hands, he argues that increased use could be made of women and children, and opportunity would be given in manufactures for the employment of persons ordinarily engaged in other occupations during their seasons or hours of leisure. In addition to this argument against the alleged difficulties confronting success in American manufacturing enterprise, he summed up the advantages which would accrue from such industry, maintaining that the produce and revenue of society would be greater than it would otherwise be, owing to the following circumstances:

1. Division of Labor.
2. Extension of the Use of Machinery.
3. Additional Employment for classes of the community not ordinarily engaged in the business.
4. Promotion of Emigration from Foreign Countries.
5. The Furnishing of Greater Scope for diversity of talents and dispositions which discriminate men from each other.
6. The Affording of a more ample and various field for enterprise.
7. The Erecting in some instances a new, and securing in all, a more certain and steady demand for the surplus produce of the soil.

A glance at Hamilton's argument at once discloses his keen appreciation of the need of a large labor force. The problem of establishing manufactures was mainly a question of how to secure a sufficient number of hands and to best utilize all of our available laboring population. The home market argument

which later swayed the West and was for a time the chief reliance of protectionists is also mentioned. Nothing is said, however, and little is intimated about the need of protection to American capital. To be sure, Hamilton advocates protection but not the artificial construction of industry. Rather, he seeks a policy which will result in the employment of all laborers to the best advantage.

The development of manufactures was sought, then, by the first great advocate of the manufacturing system along natural and economic lines. It must be remembered, also, that conditions and ideals differed from those prevailing later. Women wove and spun and made goods in their own homes. Their transition to a common workshop where a number together performed the same work as was done in the homes, with the advantage of additional machinery, was not only not generally opposed but commended. The employment of children was regarded as neither uneconomic nor injurious. In short, agriculture and commerce failed to employ our labor force to the best advantage. Much valuable time was entirely wasted, and much labor power was completely lost. In part, the development of our manufacturing industries would add an important by-product to the wealth of the nation. This by-product was to be secured by simply applying all of our available energies to the production of manufactured goods. The objection, that Hamilton favored a restrictive system which was calculated to transfer labor power from the more to the less productive enterprises, is not valid. The labor supply is indeed an important factor with him, but he would not take labor from the fields nor from the ships and the ocean. Sufficient idle labor existed to justify the nation in encouraging manufactures, for if these odds and ends were employed, great economic advantage would certainly result. Hamilton saw that the comparatively few industries in which Americans engaged offered little opportunity for diversity of talent; he felt that a greater variety of interests could be obtained and that this would conduce to the increase of national wealth. Furthermore, he looked with favor upon the increase of immigration, as adding to the labor supply of the country and giving us new power for the extension of manu-

facturing enterprises. In short, the difficulties with which the country had to contend as far as convenient, sufficient, and qualified labor was concerned, formed the subject of Hamilton's argument. It was exactly these difficulties that he believed could be obviated, and the institution of a protective system seemed to him to be capable of accomplishing this object, without limiting the industries already established in any way, but by supplementing them with otherwise unemployable labor.

In spite of the fact that Hamilton's recommendations received insufficient support, and although low tariff rates only were imposed, and these with but slight reference to current American industries, still the progress of manufacturing continued, and the factory system began to develop. Some encouragement, it is true, was desired for its development by other leading statesmen, as before indicated, but on other grounds than those urged by Hamilton. Furthermore they did not advocate the system so strongly as he did.

Natural progress, the aid of European wars, the commercial blockades instituted by France and England, and other accidental circumstances, gave impetus to American manufactures and transferred capital from commerce to the former industry. By 1810 we had developed our manufactures to considerable proportions, as the excellent and exhaustive report of Tench Coxe amply demonstrates. In his analysis of the available returns, he estimated the extent of American manufactures, excluding articles which he classed as doubtful, in the following manner:¹⁰

Total Amount	\$173,762,676
Total for Penn.	33,691,111
Total for N. Y.	35,370,988
Total for Mass.	21,895,528
Total for Va.	15,203,473
Total for R. I.	4,196,074
Total for Conn.	7,771,928

The value of the doubtful articles amounted to \$25,850,795 and included such items as: hemp, fish, salt-peter, sugar, etc. If this

¹⁰ *American State Papers. Finance*, 3: 712, 713.

figure is added to that representing the value of bona fide manufactured goods, a total of more than \$198,000,000 is reached. This, Coxe showed, compared very favorably with England which manufactured annually about \$250,000,000 worth of goods. The report enumerates the principal special industries and values the output of each as follows:

Textiles (woven and spun)	\$41,549,000
Hides and Skins	17,935,000
Iron	14,364,000
Liquors	16,528,000

The facts indicate that remarkable progress along manufacturing lines had been made, there having been no government interference, although the extraneous circumstances above mentioned doubtless accelerated activity in these industries.

With manufacturing carried on to such an extent, naturally a large number of laborers had to be employed, and a laboring class was slowly differentiated from the other classes of society. The size of this class at that time is not definitely known, but the census of 1820 states the number engaged in manufacturing as 349,000 approximately, and a large amount of goods were made by persons who were not included in this enumeration. So the actual number of persons who sympathized with the efforts of labor was undoubtedly larger. Strikes and labor difficulties occurred, to some extent, as early as the first decade of the century, but during these generally prosperous years comparatively little disturbance was occasioned. It is at a later period, after the War of 1812 and the end of the Napoleonic wars, that new industrial conditions, causing hardship to America, gave form to the struggle of labor and added to the self-consciousness of the growing laboring class. It was under such conditions, when the old system was not yet forgotten and the new industrial régime hardly inaugurated, and when contradictory situations abounded everywhere, that the discussion of a protective tariff in 1816, and later, involved the labor question. At this time arose the series of arguments, which, on one side, finally culminated in the pauper labor argument; and, on the other, in the claim that wages stood upon an independent basis.

CHAPTER II

LABOR PROBLEMS CONCERNED IN THE TARIFF QUESTION

To understand the rationale of the early argument concerning the tariff and its relations to labor, it is necessary to be conversant with the following facts, for each has a decided and distinct bearing upon the question.

1. The existence of several industries (cotton, woolen, etc.) in which the employees were recruited largely from the ranks of women and children or from labor which would have been idle otherwise.
2. The comparative dearthness of male manual labor; that is, high wages and a frequent scarcity of hands.
3. The immigration of skilled mechanics from abroad and the constant encouragement by Americans of this class of immigrants.
4. The rapid rise of machine industry.
5. Taste for certain classes of industry by particular individuals and their consequent dislike for other kinds of labor.
6. The accidental but important displacements and periods of enforced idleness caused by sudden disarrangements of the industrial system; e. g., the crisis of 1819-20, which almost without warning, thrust upon the country the difficult problem of general unemployment and in a concrete way demanded a solution of the difficulty.
7. Finally, sectional interests and a natural clash among different sections for industrial advantages; also alliances between sections to obtain certain desired ends.

The above named facts profoundly influenced the current thought of the people, and assisted in moulding their ideas in

respect to proposed legislation. Each general fact regarding industry and the labor difficulties involved, called for treatment in concrete form and apart from general theoretical and abstract considerations. An examination of the foregoing statement of conditions will show their bearing upon the questions of the day and especially upon the labor difficulties to be solved by protection or to be aggravated by it.

WOMEN AND CHILDREN

The employment of women and children in industry was one of the most important factors which hastened the advent of our protective system. As already stated, the domestic system still prevailed largely in the textile industries and a large proportion of the goods of this character which were consumed by the American people, were manufactured by the women in their homes; so it did not appear to be a revolutionary proposal to utilize their labor in manufacturing establishments devoted to the production of the same class of goods as they had been making under the old system. Here was a large volume of potential labor capable of successful utilization. The meager educational facilities and opportunities for women favored such a step. The daughters of thousands of farmers and many women in the cities saw in these industries a new field for gaining a livelihood; or at least felt that part of the year could advantageously be spent in the service of a textile manufacturer. The effect of the introduction of factories of this kind upon the work of women is indicated, in part, by the following facts.

Gallatin, in 1810, gives a short account of both domestic and factory industry.¹ Speaking of household manufactures in New Hampshire, he says, "Every farmer's house is provided with one or more wheels according to the number of females. Every second house, at least, has a loom for weaving linen, cotton, and coarse woollen cloths which is almost wholly done by women. Manufactures, per family, vary from 100 to 600 yards per year, without an hour's loss of labor to the field. Much coarse flaxen

¹ *American State Papers. Finance*, 2: 435.

cloth, worth 15 to 20 cents per yard and manufactured in families is sold to traders and sent to the Southern states." Besides enlarging upon the value and importance of the goods manufactured under the domestic system, and the fact that no labor was lost through these efforts, he prophesied, on the basis of the known facts for the year 1810, that in 1811 there would be 87 cotton mills containing 80,000 spindles in operation. These would employ 4,000 persons, of whom 3,500 would be women and children, and only 500 of the entire number would be men.²

It is undeniable that the development of manufactures was a goal to be sought for. We were importing a large amount of finished goods, the raw materials of which were to a large extent produced here or easily capable of production. Hence the practical question confronted American statesmen—how can labor power be secured to carry on these industries without sacrificing the productiveness of the industries already established? Gallatin was deeply concerned about the utility of the labor of women and children, and was unwilling to injure the profitable and growing industries of agriculture and commerce. Tench Coxe was even more radical. In discussing the cotton industry, he expressed the following sentiment.³ "Our maximum of exportation of cotton in any one year is 64,000,000 pounds. This would produce 50,000,000 pounds of yarn and require the work of 58,000 persons. Of this not more than one-eighth ought to be adult males, the other seven-eighths might be women and children. This employment of less than a hundredth part of our white population would be no inconvenience to agriculture or to commerce. This yarn could be produced with ease by 100,000 women with the fly shuttle, during one-half of each working day in a year." His comments on the woollen industry are equally significant. "The manufactory of hats, consuming more wool with few hands than any other of the ancient modes, is carried to the extent of our consumption. . . . Female aid in manufactures, which prevents the diversion of men from agriculture, has greatly increased. Children are employed as well as the infirm and crippled . . . The asylums of

² *Ibid.*, 427.

³ *Ibid.*, 669.

the poor and unfortunate and the penitentiaries of indiscretion and immorality are improved and aided by the employment and profit of manufactures. In the section of the Union occupied in part by colored laborers, decent and comfortable hospitals have been established upon some of the planter's estates, in which children, convalescents, aged persons, and married females . . . have been employed with humanity and advantage in manufacturing cloths and stuffs for apparel and furniture."

In England more than 1,000,000 people of both sexes and all ages were employed, in 1816, in the cotton and wollen manufactures. Four-sevenths of the cotton employees were women and children. Such facts were cited as examples of our own possibilities. Idleness was held in disfavor and unnecessary leisure regarded as a waste of our economic power. The Philadelphia Society for the Promotion of Domestic Industry well illustrates this point of view.⁴ It called particular attention to the desirability of employing persons who would otherwise be idle, on account of temper, habit, or other causes. It claimed, furthermore, that women and children were rendered more useful by being employed in manufacturing establishments. It argued, in addition, that factories would give employment to classes of the community not ordinarily engaged in the business, but who are willing to devote their leisure time, resulting from the intermission of their ordinary pursuits, to collateral labors as a resource for multiplying their acquisitions or their enjoyments.

Popular feeling and economic conditions thus combined to give added support to the cotton industry. After 1815, however, the industry began to be depressed, owing largely to increased competition from abroad; and manufacturers appealed to the nation for assistance. A congressional investigation was instituted and the following report was the result:⁵ The capital invested in cotton manufactures in the United States was estimated at \$40,000,000. The number of laborers reached 100,000,

⁴ *Address*, 62.

⁵ *Rep. of Com. on Commerce and Manufactures, in American State Papers. Finance*, 3: 32 ff.

of whom 10,000 were males seventeen years and upward, 66,000 were females, and 24,000, boys. The total wages paid annually amounted to \$15,000,000 and 81,000,000 yards of cotton were manufactured. This report indicates the importance of woman and child labor at that time, which affected not only the general labor supply but sometimes resulted in making families dependent upon their children for support.⁶ The maintenance of a livelihood having become easier for many parents, they naturally were interested in the continued growth of the industry.

The conspicuous feature of the tariff act of 1816 is the protection it afforded to cotton goods. The duty was fixed at 25 per cent. and was to remain so for a period of three years. The system of minimum valuation was applied and no cotton cloth was to be rated at less than \$.25 per yard. The purpose of the act was largely to protect the capital invested in this industry but subsequently other industries were protected. It is significant, however, that the industry employing the greatest proportion of women and children was the first one receiving important protection, nor should it be forgotten that the employment of women and children and its advantages received considerable attention and was a part of the labor phase of the tariff discussion, which became so important later.⁷

In the woolen and other textile industries the same kind of labor was employed and it was only after 1820 that Irish immigration began to displace the English and American girls in our factories.⁸ There was little or no controversy over their employment, and their labor was regarded as an addition to the wealth of the nation. The higher duty on cotton goods was undoubtedly more easily secured owing to the predominance of female labor in that industry. The extensive employment of child labor also made possible a rapid increase of industry along certain other lines. Not only had the textile industries been invaded but the manufacture of tobacco and paper was accelerated in this way, the wages paid to children being compara-

⁶ Batchelder, Samuel, *Cotton Manufacture*, 74.

⁷ *American State Papers. Finance*, 3: 18, 28.

⁸ Depew, *A Hundred Years of American Commerce*, 29.

tively low.⁹ The labor of women and children was a decided factor in establishing a number of our industries.

SCARCITY OF HANDS AND UNEMPLOYMENT

These two factors played a large part in the tariff discussions of the early protection period. Hamilton, as we have seen, pointed out the disadvantage due to scarcity of hands but tried to minimize its effect. In fact the attitude of protectionists was quite uniformly that of Hamilton, while free-traders emphasized and perhaps magnified these features of American wage conditions. No wonder then that an appeal was made in favor of manufactures and the protective system on the ground that the sons of farmers were unemployed during the winter, and that they would gladly utilize their labor power in factories during this period. Scarcity of hands was a real problem to the friends of American industry. There was a definite class of seamen. The mechanical trades were also important and the labor difficulties of the first decade of the century pertained largely to these classes. A well differentiated manufacturing or factory class, however, did not yet exist. The rapid growth of the western states continually aggravated the difficulty, while the slower growth of the eastern and landless states indicates the course of migration. Between 1790 and 1820 the increase in the population of Massachusetts averaged about 11 per cent. per decade; that for Rhode Island, Connecticut, Delaware, and Maryland was considerably less; while states with large areas of unoccupied land—such as New York, Pennsylvania, Maine, and Ohio—showed a tremendous increase. Agricultural pursuits were too attractive and too remunerative to permit the formation of a very large male manufacturing class. The dangers and trials of the wilderness deterred many, it is true, from migrating westward and this fact helped to swell our manufacturing population, but the hardy and ambitious young men preferred to become land holders. Therefore our people were largely engaged in agriculture and little skilled labor existed,

⁹ *Accounts of Manufacturing Establishments.* Washington, 1823.

but in a few industries exceptional progress had been made; for example, in the manufacturing of hats. In this industry we had excelled for a long time and to such an extent that by 1814 we were actually exporting hats in considerable quantities.

In certain other industries, such as have already been named, considerable proficiency had been acquired but, in the main, there was a dearth of skilled labor and this deficiency had to be supplied, in part, by the independent skilled mechanic who was both laborer and capitalist, or by the importation of goods from abroad.

The mechanical trades were represented by a small variety of artisans; chiefly carpenters, blacksmiths, shoemakers, and such others as ministered to local wants.¹⁰ Not only were they numerically important, but were also influential factors in the life of the community. Auburn, New York, with 2,047 inhabitants in 1818, had 74 mechanics' shops and 211 dwellings.¹¹ Ithaca gave similar proportions. Mechanics were numerous everywhere but often mechanical art was an avocation only, while agriculture was the chief occupation. For example, one-third of the male inhabitants of Hall county, Georgia, were artificers or workmen of some kind, but most of them relied upon agriculture.

The mechanic differed from the ordinary laborer. He was usually an independent producer and possessed capital of his own. He was furthermore regarded as more or less skilled. Mechanics and laborers, however, belonged to the same general class, and it is only later that a sharp differentiation took place, the interests of the mechanic being the first to receive attention. In the tariff debate of 1820 this class is mentioned as forming one of the parties entitled to consideration in the laying of tariff duties, and from that time on the interest of the mechanic in the tariff question is apparently considerable. The mechanical trades supplied the need for labor to a certain extent only and the general difficulty still remained. Mechanics were loath to change from their old independence to the new conditions of factory life, and in but comparatively few cases was it possible to rise

¹⁰ Stanwood, *American Tariff Controversies*, 1: 17.

¹¹ *Darby Tour*, 219.

to factory ownership and to the position of employer. These facts caused those interested in the development of manufactures to turn to such measures as were available, so as to provide a labor supply adequate to meet the new needs and demands. The problem of skilled labor was not easy to solve.

The industrial revolution in England had produced a series of striking changes, of which the effects of new machinery were most important. Machinery was a prime factor in solving the problem of manufactures in that country.¹² It was estimated that in 1808 the diminution of manual labor in the cotton industry by means of machinery was as 200 to 1.¹³ In America, indeed, machines for printing cotton and woolen cloth were in operation. 10,000 yards could be printed in a day by one man and two boys. The general scarcity of labor and comparatively high wages gave a decided impetus to invention. Our patent laws, though defective, had received some revision and great progress was made under them. During the single year of 1812 there were 237 patents granted in the textile industries alone.¹⁴ By 1814 hundreds of carding machines had been introduced in New York; wool picking machines were used; the fly shuttle was being multiplied and many European improvements were employed. The tariff controversy of 1816 brought out the declaration that "a great proportion of the woolen manufacturing is done by the assistance of labor-saving machinery, which is almost exclusively superintended by women and children and the infirm who would otherwise be wholly destitute of employment."¹⁵ Two ways of solving the problem of manufactures are suggested here, while the inference that general hands were scarce can be clearly drawn. It is undeniable, however, that England excelled us by far in the machinery which she was enabled to utilize and that she had advanced in the industrial arts to a much greater degree than manufacturers in America. A large part of England's ability to produce goods cheaply lay in her possession of good labor-saving machinery—an advantage

¹² *Philadelphia Advertiser*, Nov. 6, 1819.

¹³ *American State Papers. Finance*, 2: 669.

¹⁴ *Levasseur, American Workman*, 25.

¹⁵ *American State Papers. Finance*, 3: 164.

which we could not overcome for many years. In 1824 Henry Clay estimated that machinery did the work of 221,000,000 men in England, but in America that of 10,000,000 men only.¹⁰ This was a tremendous handicap, but the physical and economic conditions of America soon started us on the way toward improvements and inventions of all kinds, and, coupled with the well-known American ingenuity, finally gave us a preeminent position. At that time, however, the question of machinery was a serious problem and materially impaired the comparative efficiency of our laboring population.

With such conditions existing, it seems contradictory to assert that the problem of unemployment was an important factor in protective legislation. Unemployment and scarcity of labor cannot exist side by side, yet both factors contributed to the discussions of the tariff. In this connection two things must be kept in mind; first, the fact that the friction of travel and the inconveniences incident to migration were so great that labor might be abundant in one section and quite scarce in another; and, second, that crises, or the sudden disarrangements in industry, with their accompanying depression might turn thousands of men out of employment and deprive them of a means of gaining their livelihood.

Unemployment has the immediate effect of drawing attention to the concrete situation with the result that the theoretical considerations are largely abandoned and a temporary policy adopted. The positive and concrete side of the protective controversy has had an almost invariable advantage. The fact of the existence of a general depression has had an important influence upon the enactment of three protective laws. The crisis of 1819-20 measurably affected the tariff legislation of 1824; the depression commencing in 1837 and lasting several years helped to determine the Act of 1842, and the hard times of 1893-96 culminated in the Dingley tariff of 1897.

Before the inception of our protective tariff system, unemployment was but a minor phase of American industry. Foreign competition, however, proved disastrous to many of our manu-

¹⁰ *American Sentinel*, April 14, 1824.

factures, and frequently other causes cooperated to injure them. England tried to prevent the exportation of machinery to America in order to retain her market here. False standards of custom had arisen and frequently a foreign article was preferred to the equally serviceable American product. Some of the states had given protection to certain industries before the adoption of the Constitution, and the removal of interstate barriers injured such industries. Again, foreign skill was largely superior to that acquired by Americans.

These causes tended to produce considerable unemployment or depression from time to time. Accordingly appeals were made to the government for aid. Manufacturers, mechanics, tradesmen, and "others" frequently asked Congress for relief, for a change in the tariff schedule, and for such duties as would again bring prosperity.¹⁷ Petitions were received from all the important cities during the first year of the new government and in subsequent years requests for help were continually made.¹⁸ While Congress gave but little encouragement, it is significant that aid was hoped for from that quarter.

The increasing unemployment following the year 1816 and culminating in the great crisis of 1819-20 gave a powerful impulse to our tariff policy and popularized protection in many parts of the union. The return to peaceful pursuits of thousands of European soldiers at the close of the Napoleonic wars, England's attempt to break down our manufactures, the inflation of American currency, and other causes contributed to the serious maladjustment in our industrial system. The year 1818 had been apparently prosperous. Building was carried on at a rapid rate. Evidences of a boom were in the air. Mechanics, carpenters, and masons were in great demand. New York City could not supply its needs. Even journeymen could not be procured at the rate of \$2.00 per day and hundreds more could have found employment. The farmers were receiving good prices and enjoyed a large degree of prosperity. Flour rose to exorbitant figures and other products followed.

The sudden panic coupled with the increase of imports par-

¹⁷ Bishop, *op. cit.*, 2: 15.

¹⁸ *American State Papers. Finance*, 1, 2.

alyzed American manufactures, and a rapid fall of prices followed. Although cotton had been protected, many cotton factories perished, those equipped with the best machinery surviving. Rents and the value of real estate depreciated. Farmers sold lands at one-half or one-third of their value. Vast numbers of handicraft workmen entered into competition with the farmer, thus increasing the product although there was practically no market. It was estimated that real estate in New York fell 18 per cent. between 1815 and 1821, while the expenditures for the relief of paupers nearly doubled.¹⁹ Pennsylvania and Rhode Island also suffered severely. The depression in cotton had occurred in 1815-16 and a similar distress was felt in Pittsburgh during the latter year.²⁰ Two-thirds of its population was engaged in manufacturing, thus accentuating the keenness of the depression. Most of the flour of western Pennsylvania found a market here and much bacon was brought from the West. The distress among the laborers lessened the ability of the farmers to dispose of their surplus products, a fact which gave an added impetus to the home market argument for protection. Conditions grew worse, however, and by 1819 had become almost intolerable. The major portion of the laborers in this locality were out of employment, and the situation in Philadelphia was no better. An investigation in the latter city revealed the fact that the number of laborers employed had decreased from 9,425 in 1814-16 to 2,137 in 1819.²¹ A fall in the weekly wages from \$58,340 to \$12,822 is also recorded, indicating the degree of distress which must have prevailed. The cotton, woolen, and iron industries had been almost entirely wrecked, while other industries suffered greatly. Poverty in Pennsylvania was wide spread and the actions for debt taken in the courts of that state within the single year 1819 amounted to the almost incredible number of 14,537.²² Imprisonments for debt in the city and county of Philadelphia alone rose to the number of 1,808.

¹⁹ *Ann. of Cong.*, 42: 2074.

²⁰ McMaster, J. B., *History of the People of the United States*, 4: 344.

²¹ *Address before Philadelphia Society for Promotion of Domestic Industry*, 11.

²² Carey, M., *Ohio Branch*, 133.

The total amount of unemployment throughout the country can only be estimated. In a single year, says Denslow, 70,000 operatives were discharged and driven into idleness or agriculture.²³ Thousands, it is true, turned to farming and did not remain idle. Bishop estimated that from 40,000 to 60,000 persons were thrown out of employment during these years and that 160,000 to 240,000 were deprived of support. During 1819-20, however, the crisis was most acute and at least 30,000 persons were divested of employment, of whom many were said to have been reduced to poverty or compelled to break stones on turn-pike roads at \$.25 to \$.37½ per day.²⁴

Such an extraordinary crisis necessarily exerted a profound influence over the opinions of the people. The manufacturing population was sufficiently large to impress its importance upon the popular mind. By 1820 both Massachusetts and Rhode Island employed one-half as many persons in manufactures as in agriculture. Pennsylvania stood third with 42 per cent. and other states had made considerable advance.²⁵ How these facts affected the growth of protection is shown by the events of the immediately ensuing years.

About 1817 the first important society for the promotion of American industry was established at Philadelphia. Composed in part of manufacturers, it had, however, for its moving spirit Matthew Carey, who first awakened public attention to the need of a system of internal improvements in Pennsylvania, who favored a system of free, universal education, and who labored long and energetically for the poor. During the years 1818-22 he wrote a large number of essays appealing to the people of America to adopt the protective system. His discussions covered the entire range of available arguments and they throw light on prevailing conditions and the general sentiment of the people. Carey pointed to the desperate condition of the American people and included in his enumeration the statements that from one-third to one-half of our merchants were ruined, that thousands of our workmen were idle and that the city officials

²³ *Economic Philosophy*, 381.

²⁴ *American State Papers. Finance*, 3: 493.

²⁵ *Census of 1820*.

of Philadelphia, after canvassing the situation, concluded that the unemployed in that city alone numbered 11,000.²⁸ He emphasized the low wages which many workmen received and computed that probably 150,000 manufacturers or descendants of manufacturers (laborers) were tilling the soil in western states and in the interior of New York and Pennsylvania who, under a proper system, would still be engaged in manufacturing. Besides calling attention to the starving condition of many recent immigrants, he lamented the fact that many of our citizens had migrated to Cuba to recover from their disasters. Carey drew a striking contrast between the prosperous conditions which prevailed at the close of the war and the lamentable state of industry and the distress of the years of the panic and depression. The emphasis which he placed upon the fact of unemployment was peculiarly apropos to the existing state of affairs, and his proposed remedy was therefore fitted to receive considerable attention. To revive prosperity he desired an extended application of the principle of protection. He believed that the protective tariff would again enable us to utilize our idle capital, to build factories, and that it would give employment to the thousands who were idle or were laboring for a bare pittance.

His appeal for protection had a wide-spread influence, laborers especially being struck with the argument concerning unemployment and the method of relief. After 1820 his writings began to be studied more carefully and the younger men also gave considerable attention to the lives of Hamilton and Franklin,—a fact which strengthened their views on the tariff. The severity of the panic and the concomitant growth of protection literature left a lasting impression upon the people of Pennsylvania. Since 1820 they have been unflinchingly in favor of a protective tariff. In fact, as a single cause giving impulse to protection sentiment, the crisis of 1819-20 was one of far-reaching consequences.

Carey's efforts were seconded by men everywhere. Citizens of Philadelphia adopted resolutions deploring the prostrate

²⁸ Carey, M., *Essays on Political Economy*, 198, 233, 441, etc.

state of manufactures, the unemployment of the workingmen, and their reduction to mendicity. One resolution stated that no candidate for the state legislature or for the Congress of the United States would receive support from them unless such candidate was known to be friendly to the protection of domestic industry.²⁷

State legislatures took up the discussion and inquired into the cause of the great depression and hard times. The legislature of New York declared in 1820 that the influx of foreign goods had destroyed the credit of many country merchants and was breaking up our manufacturing establishments; that thousands of our laborers were thrown out of employment, and that many had become a public charge. In this way the cause of protection continued to gather volume. Even Tammany Hall was affected. To a large extent it drew its support from the class of people who were thrown out of employment. In deference to the sentiment of these adherents, it issued an address in 1818 favoring a moderate protective tariff, but it was later forced by the shipping interests and merchants to return to the advocacy of free-trade.

Other signs of the times are noticeable in the fact that 30,000 persons throughout the middle and eastern states memorialized Congress for relief.²⁸ In Congress stress was laid upon the propriety of enacting legislation for the benefit of large classes of people who were suffering from want. The tariff bill of 1820 failed, however, but this fact must be attributed not to the triumph of the opposite principle but to the successful opposition of merchants and planters who believed that their prosperity depended upon free-trade. The argument against the constitutionality of protective legislation had been mentioned before but as yet had little weight. It gathered its impulse in the South, but only after it became apparent to that section that protection was an injurious policy in respect to her industries, and an advantage to the remainder of the Union. The labor side of the tariff controversy in Congress at that time is well represented by Baldwin of Pennsylvania, who voicing the well

²⁷ *Niles' Register*, 17: Sept. 4, 1819.

²⁸ Carey, *op. cit.*, 387.

crystallized sentiment of that state said, "Hundreds, thousands of our citizens are out of employment. They would add infinitely to the national wealth, to our independence, and save its resources at home if their labor was employed in converting our raw materials into fabrics for our own use."²⁹

The mechanic whose interests were not regarded as identified with those of the manufacturer received the following fulsome praise from another speaker. "The cardinal interests to be supported by the government appear to be agriculture, manufacturing, commerce, navigation, and that of the mechanic.

. . . . It is not confined to great cities, of which it forms the bone and gristle, but has its stand of influence and respectability in every village and agricultural section of the nation."³⁰

Echoes of the influence of panic and depression were heard in 1824 when Clay, who as the representative of the West relied chiefly upon the home market argument for protection, stated, "The truth is, no class of society suffers more in the present stagnation of industry than the laboring class. That is the necessary effect of the depression of agriculture, the principal business of the community."³¹

Baldwin and Clay were spokesmen for two sections. The evil of unemployment was felt more heavily in the East, that of agricultural depression in the West. Hence the former emphasized the labor argument while the latter subordinated it to the demand for prosperity in agriculture. That the subject of enforced idleness was still widely exploited is clear, however, from the remarks of Webster, who at that time was still a free-trader.³² "We do not need work for hands," said he, "but hands for work. -I do not find those idle hands of which the chairman of the committee speaks. Capital solicits labor; not labor, capital. The mere capacity to engage in agriculture gives our young men independence."

The attention paid to the subject of unemployment by prominent partisans in the tariff controversy clearly indicates that

²⁹ *Abridgement of Debates*, 6: 607.

³⁰ *Plain Sense on National Industry*, 47-48. New York, 1820.

³¹ Speech in Congress, March 30-31, 1824.

³² *Ann. of Cong.*, 42: 2063.

consideration for the laborer was beginning to be necessary. The crisis of 1819-20 had developed a more serious side of the growing labor problem and helped materially to pave the way for the more complete development and evolution of the labor argument for protection.

HIGH WAGES OF LABOR

Turning to another side of the labor situation, we find that protectionists had considerable difficulty in reconciling their positions, and that the variety of economic conditions made consistent argument difficult, at least until the various points contributing to the argument could be carefully selected, properly correlated, and then reared into a permanent structure. A brief review here of the general facts regarding wages will suffice to point out the line of the development and the subsequent change in the character of the argument.

The reputed dearness of labor in the early decades of the nineteenth century was a comparative, not an absolute, fact. Compared with the wages paid to English and continental laborers, the American wages were far superior. On the other hand, the wages paid in the United States have increased almost steadily since 1800, progress having been interrupted only by crises and depressions.

These high wages, the extent of which Hamilton tried to minimize, and which manufacturers bewailed, were closely dependent upon the amount of free land accessible to the American laborer. The amount of land was practically unlimited. It could be secured on easy terms, was fertile and insured its possessor a life of independence and a considerable competence. The American people were accustomed to pioneer and wilderness conditions, hence migration to the West was not a dreaded alternative for the larger number of laboring men of the East. The earnings of the western lands roughly determined the wages of labor. Consequently the price of labor was comparatively dear. Our manufacturers were at a disadvantage. England was the chief competitor in our own markets, and had the advantage of low wages and good machinery. Furthermore she exerted herself to retain this market, by prohibiting the ex-

portation of machinery, by stringent emigration laws, and in other ways. High wages was a difficulty not easily counteracted by other mitigating forces.

Wage conditions in England made it possible for that country to place goods upon the market very cheaply. Gibbins³³ says that between 1800 and 1845 wages for both manufacturing artisans and agricultural laborers were very low, that for some thirty years the wages of weavers were often under fourteen shillings per week and sometimes even less than five shillings, and that from 1830 to 1845 they ranged from thirteen to seventeen shillings for men and from seven to nine for women. Prices for wheat were very high, and little butter, cheese, bacon, tea, or sugar was consumed by the working men. The rapid increase in her population, bad poor laws, and other causes kept wages very low, much lower than the ordinary American manual laborer was willing to accept.

There were several classes of labor, however, whose rates of wages must be distinguished from each other. These were common and agricultural labor, that of women and children in factories, that of unskilled men in mines and factories, and that of the skilled mechanic. Even a brief survey of wage conditions with the scattered data at our command, indicates the appalling lack of appreciation of higher standards of life. The high wages of the second and third decades of the century seem contemptibly low today, yet as late as 1842 Calhoun spoke of high wages as a drawback to the development of American manufactures.

The wages of agricultural labor stood comparatively high in 1818, as did that of other labor, and allowance must be made in comparing this rate with the wages subsequently paid. According to an estimate made in 1832³⁴ the average rate paid in the principal New England states and New York in 1818 was \$10.00 per month. In Pennsylvania, Maryland, the extreme South, Southwest, and the far West of that day the rate was higher, being \$11.00 in the first state and rising as high at \$15.00 in Missouri. In Virginia and North Carolina \$6.00 was

³³ Gibbins, *Economic and Industrial Progress of the Century*, 347.

³⁴ *Congressional Debates*, 8: 217.

the rule, and for Ohio the paltry sum of \$9.00 is recorded! By 1826 wages had fallen nearly 10 per cent., every locality contributing to the decline. The rate continued stationary for some years, 1830 showing but little change. The comparatively high wages of agricultural labor of the sparsely settled states, Missouri excepted, had, owing to increased immigration, been slightly reduced, but Pennsylvania and New Hampshire showed gains, while New York paid but \$8.00 per month. Wages in Massachusetts seem to have risen from \$8.00 per month in 1815 to about \$11.00 in the following two decades. These were high wages compared with those paid during the latter part of the eighteenth century. The depression of 1819-20 affected the wages of farm labor, many persons having been thrown out of employment. Clay in 1824 estimated the wage of able bodied men at from \$5.00 to \$8.00 per month. The daily wage was somewhat higher, an average of \$.75 being regarded as a proper figure. It varied considerably within the same state, however, and also with the seasons. Harvest wages of \$1.12 and board were reported in 1819. The rest of the year the rates were much lower, often but \$.50 a day, and during the following winter no other consideration than that of board and lodging was hoped for in many parts of the United States. The general stagnation had affected agricultural as well as other labor. As long as transportation facilities were inadequate the farmer of the interior could not hope for high prices for his produce nor pay wages which compared with those prevailing in other lines of work. The subsequent opening of canals made higher wages possible in the territory tributary to the new waterways, and additional facilities of travel tended to raise the wage of the farm hand. On the whole, however, the reputed high wages of labor were high only when compared with the price of foreign labor. In 1825⁸⁵ the monthly rate in England was but \$6.50 and that in France varied from \$4.00 to \$6.00, while the price of wheat in both countries far exceeded the American figures. Labor on the turnpikes received wages similar to those in agriculture, \$.50 to \$.75 per day was a cus-

⁸⁵ *Report on the Statistics of Labor, (Mass.), 1885, 180.*

tomary price about 1828. Henry Carey estimated \$.78 to \$.80 as the usual wages of the laboring man between 1820 and 1830, and that eleven days' labor was sufficient to obtain a quarter of wheat, although the labor of sixteen days was required in England to secure a like quantity. Such conditions of advantage were the cause of the complaint in regard to high wages, and in the absence of better ideals, this view-point is easily understood.

The labor employed in factories received various rates of remuneration. The transition to the factory system carried with it a large amount of woman and child labor. The wages paid were high enough to tempt only this class of labor into industry. In 1812, boys of sixteen were frequently employed at no more than \$.42 per week. The congressional committee which in 1816 investigated the cotton industry estimated the average annual wage of the employees at \$150. The majority of these were women and children, so that probably a higher rate for children than the one mentioned above obtained at this time. In 1832³⁶ the operatives in this industry were paid an annual wage of approximately \$154. The wages of men were estimated at \$5.00 per week, those of women at \$2.00 and of boys at \$1.75. While before the advent of the factory system the ordinary price of women's labor was \$3.00 and less per month, and board, now it was more than doubled. From \$1.75 to \$2.00 per week were the prevailing rates for women during the thirties and by 1840 even boys received as much as \$2.00 and board,—a figure considerably higher than that formerly paid.

The investigation of industrial conditions in Philadelphia in 1819³⁷ revealed rates of wages which in 1816 varied from \$3.12½ to \$9.00 per week and averaged \$6.20. The lowest wage was paid in the woolen industry, while in the textiles, in general, the lower rates prevailed. Male adult labor, however, received as much as \$7.50 per week in certain cotton factories, although the average here was considerably less, being perhaps about \$5.00 during the second and third decades of the century. Yet free-traders pointed assiduously to the reputed dearness of

³⁶ Carey, H. C. *Essay on Rate of Wages*, 89.

³⁷ *Address before Phila. Society for the Promotion of Domestic Industries*, 11.

labor, claiming that wages were 100 per cent. higher here than in England, thus making competition in manufactures impossible.

The iron industry in Pennsylvania employed a large number of men and with its increasing importance became implicated in the tariff discussion. About 1820³⁸ the wages paid to the iron operatives varied but little from \$200 per annum. Similar statistics for certain New York establishments indicate a yearly wage of about \$250, but other states yielded less favorable results. By 1832 wages had risen and an average of \$300 per year was reported. Figures based upon the census returns of 1840,³⁹ however, indicate that the average wages paid in that year had reached a per capita total of \$365. Wages in the coal industry were a matter of some importance in view of the controversy over the duties on coal. In the spring of 1836⁴⁰ miners received \$7.00 per week and owing to extraordinary competition for men the rate subsequently rose to \$2.50 and \$3.00 per day. Foreign workmen were promised at least \$1.00 per day for every working day in the year if they would come to America and enter the mines. Thus it appears that the price of labor in the coal mines corresponded closely to the wages paid in the iron industry.

The wages of mechanics, many of whom took strong ground for protection during the first period of active protectionism, underwent considerable variation during the same time. Henry Carey⁴¹ estimated the wages of carpenters and bricklayers in the years 1783-90 at from \$.62½ to \$.75 per day, but in 1834 the wages of the former were \$1.12½ to \$1.25, and of the latter \$1.37 to \$1.50 per day, although the average price of wheat was less in the later period than before. Pittsburg shoemakers in 1815 received from \$9 to \$12 per week and paid \$2 to \$3 for board. In 1818 mechanics—carpenters, blacksmiths, cabinet makers—and tailors about Philadelphia received from \$9.00 to \$11.25 per week. The persons employed in the more necessary

³⁸ *Digest of Accounts of Manufacturing Establishments.* 1823.

³⁹ *Convention of Home Industry.* 1842.

⁴⁰ *24th Cong., 2d Sess.; Sen. Docs., 1, No. 59.*

⁴¹ Carey, H. C., *Essay on Rate of Wages*, 26.

trades were well paid, but others fared less favorably, thus occasioning important migration for want of sufficient employment. The extensive building before the crisis of 1837 operated to enhance the wages of carpenters and allied trades, many of whom were securing \$2.00 per day. The crisis,⁴² however, seriously affected the earning power of large numbers of our laborers and mechanics, thus paving the way for a renewed demand for higher wages. With carpenters and masons enjoying wages 50 per cent. higher than those paid in England, the American mechanic had a decided economic advantage but furnished the selfseeking manufacturer an adequate basis for complaint.

In spite of predictions to the contrary the price of labor was higher in 1840 than at the beginning of the century. The movement of prices was, on the whole, favorable and thus contributed to an increased real wage for the laborer. The increasing facilities for agriculture coupled with better machinery accelerated the steady rise of wages. Farm labor was affected by the growth of manufacturing industry, which apparently tended to increase the wages of the former. The comfortable wages paid in industrial sections point to that result. The free lands of America, on the other hand, gave us one incalculable advantage over Europe, and made it impracticable to pursue any industry which could not afford high wages unless unnatural conditions interfered or protective legislation was adopted. Henry Carey, writing in 1835, recognizes the comparative dearthness of labor in America. He further points out its greater productivity and maintains that our female factory employees received higher wages than the average amount paid to men, women and children in the English cotton mills. Yet in comparing the various classes of laborers with those in England he finds a smaller advantage in our favor than do the ardent free-traders of the same period.⁴³ The crisis of 1837, however, threatened the high wage of the American laborer, and the miserable conditions prevalent in England depressed the wages of her operatives to shamefully low levels. The contrast between the two countries was accentuated, and not only our

⁴² *Log Cabin*, Sept. 26, 1840.

⁴³ Carey, H. C., *op. cit.*, 81.

superiority emphasized, but the necessity of our retaining a high standard for our working men was duly insisted upon. In addition to wage rates already given, paper manufacturers now paid \$6.00 to \$9.00 per week, and the average wage in cordage establishments in Massachusetts was \$1.06 per day. Our glass workers received much higher wages than the prevailing rates abroad. English testimony shows that, in some cases, the wages of man, wife, and two children, all engaged in the cotton industry, were about equivalent to the sum obtained by a well paid female operative in America where high wages were receiving greater appreciation. The fact that wages were higher in the North than in the South vitally affected the tariff question. While \$20.00 to \$25.00 was paid per month by northern operators, \$15.00 only was paid in the South for similar work. The free labor of the North was receiving good wages, while southern labor, suffering from an obsolete industrial system, was placed at a disadvantage. A comparison with the prices of foreign labor therefore became more complicated and explains in part the divergent views held upon this question.

To summarize, it is apparent that the wages of mechanics were highest; that the early dearness of labor had not abated, but was gradually increasing; that female employees and children were gaining ground; while agricultural labor, although practically stationary during the third decade, subsequently improved its condition. Relatively high wages was a fact, hence the tariff could not leave it out of consideration. These facts were responsible for certain definite results. First, only those industries could succeed in America whose productivity was very great, and in which, therefore, high wages could be paid. Our machinery must be good and our labor skillful, otherwise competition would be impossible. In both cases we experienced considerable difficulty. Second, cheaper labor was used wherever possible, thus introducing women and children into the factories, and encouragement was given to the immigration of labor from abroad, especially that possessing some degree of skill. Consequently the actual rate of wages paid was of less importance in tariff discussion than the relation between wages here and abroad.

IMMIGRATION

The defects in our industrial system were so great that skilled labor from abroad was heartily welcomed. As we have already stated, America had certain disadvantages, one of them being a dearth of hands skilled in certain industries which we desired to develop but which so far had not been vigorously prosecuted on that account. The immigration of skilled mechanics and artisans from abroad was earnestly sought to fill up this gap in American industry.

Tench Coxe in his summary of the manufacturing industry, pointed to the fact that no branch of manufactures received so large an accession of foreign workmen as the woolen industry, because the raw material and its manufacture were so universal in Europe. Progress in this industry was especially hoped for through further immigration. In 1816 woolen manufacturers, in petition to Congress, again suggested the advantage of development along these lines. After indicating the gain resulting from the employment of classes unfitted for agricultural pursuits, they called attention to the importance in this industry of valuable foreigners who at home had been solely engaged in manufacturing. The fact that England had attracted immigrants in former years and through them built up a number of her own industries was cited as an example of our possibilities. Artisans and skilled laborers were needed, and as late as 1827 Secretary Rush said that under a proper manufacturing system we might reasonably expect to see a new class of immigrants coming to the United States; that not only unemployed journeymen from foreign work-shops but master manufacturers with capital would come and that they would stimulate our industry and hasten our progress.⁴⁴ Matthew Carey,⁴⁵ writing at the time of great depression, feelingly expresses a similar view in the following words: "Thousands and tens of thousands of artists, mechanics, and manufacturers, with talents beyond price and many of them with handsome capitals, escaped from misery

⁴⁴ *Report on Finance, 1815-1828*, 404.

⁴⁵ Carey, M., *Olive Branch*, 238-9.

and oppression in Europe and fled to our shores as a land of promise where they expected to find room for the exercise of their industry and talents. They sought employment at their usual occupations. None was to be found. Numerous instances have occurred of cotton weavers and clothiers, etc., who have sawed and piled wood in our cities and some of them have broken stones on our turnpikes for little more than a bare subsistence. Many hundreds have returned home, heartbroken and lamenting their folly. . . . Many of those who have been unable to return, rendered desperate by distress and misery, have proved injurious to the country to which they might have produced the most eminent advantages." As spokesmen and friends of American industry, both Rush and Carey point plainly to one of our difficulties and disadvantages, and in so doing suggest the connection between the protective tariff and the encouragement of immigration.

Our early immigration was not extensive and England retarded it somewhat. Her laws allowed vessels from Great Britain and Ireland to carry to our shores only one passenger for every five tons burden, but it was permissible to carry a passenger for every two tons burden if the vessel were bound for other ports than our own. This law did no great amount of injury, for the immigration of the first quarter of the century was largely English and Irish, and the law was subsequently repealed. We welcomed these men and societies were organized to take care of newly arrived immigrants even before the close of the eighteenth century. It was for economic reasons mainly that we desired this addition to our population, and the first objections to immigration were based upon political grounds. But the problem of the establishment of manufacturing industries was to be partially solved by inducing foreigners to come among us, and the tariff was to be used as a means to that end.

As for the occasional labor which might be employed in manufacturing, a word may be profitably added. Industry was still in a state of instability. Many important features of the old domestic system were still retained. A large proportion of the labor was not continuously employed in the same industry and many were idle when they might have been advantageously em-

ployed. Such a waste seemed needless, and ardent friends of manufactures hoped to utilize this economic power. In 1816 the regular employees in the woolen industry were estimated at 50,000 and those occasionally employed at the same number. The ratio here given is quite significant and indicates another source of labor.⁴⁶ The small factories and the prevailing desire of the majority for pecuniary advancement accentuated this species of employment, and made possible the argument used by Hamilton and by later protectionists. Never a very strong argument, however, it soon lost its force as economic conditions changed and sharper differentiation among laboring and industrial classes took place. Still this argument of occasional labor cannot be entirely neglected, for the woolen industry, which later became the subject of considerable tariff legislation, depended partly upon this particular kind of labor.

In conclusion it is clear that a general scarcity of labor prevailed in the manufacturing industry. Agriculture and commerce had made extreme demands on the labor supply. The unfortunate depression after the War of 1812, however, so disarranged industry that an excessive amount of unemployment obtained for a number of years. The ideals of the times were such that the people instead of disapproving of woman and child labor, not only favored but encouraged it. Its importance in the cotton industry cannot be overlooked. The same is true of the irregular labor engaged in the woolen manufactories. The bearing of the need of skilled artisans and mechanics, of the demand for better machinery, and of the encouragement given to immigration, must also be considered in discussing this side of the tariff question.

Finally, the fact of high wages stands out pre-eminent. In spite of unemployment and crises and the temporary depression of wages caused by these conditions, a normal wage comparatively high continued to maintain itself. Actual wages tended to approximate to this standard which was far above that of European countries and hence gave our manufacturers considerable trouble.

⁴⁶ *Address before Philadelphia Society for the Promotion of Domestic Industry*, 86.

The facts and conditions above named, differing for different sections, added to the chaos of argument in respect to the protective tariff. With emphasis, however, placed upon the subject of wages, and with a more consistent correlation of the other difficulties in respect to labor, the way was prepared for the evolution of the labor argument—which is to be traced in the subsequent pages.

CHAPTER III

THE DEVELOPMENT OF THE LABOR ARGUMENT
TO 1824.

Having concluded the survey of the fundamental facts and conditions upon which the argument was based, let us turn to the development which the argument itself underwent at the hands of protectionists. The attitude of their opponents and the changing character of their position must likewise be considered in order to enable us to understand and to explain the evolution of the labor argument for protection.

In the preliminary tariff struggle of 1816 the subject of labor was given little attention, except in relation to that of women and children and of persons who would probably not give all of their time to other industries. Protection to cotton, however, served to accentuate this phase of labor. The demoralization of this industry was a heavy blow to progress in manufacturing enterprises. The quasi-protection which it had received during the long period of political turmoil in Europe having been suddenly withdrawn, it was forced to fall back upon its inherent power to maintain itself. The rapid advancement which the introduction of machinery had afforded gave strength to the cotton industry, and the preponderance of women and children in the mills, together with the comparatively low wages paid them, also operated in its favor. The employment of this labor having been permitted, and having risen to considerable proportions, it became difficult to permit the collapse of this industry, not only for the sake of the capital invested, but also on account of the fact that the labor employed was the least independent. Protectionists scored a victory at a point where opposition was apt to be least concentrated and persistent, but

it opened the way for the advent of an entire protective system. The apparent advantage in securing and continuing a form of labor unfitted for agricultural pursuits, and which would not be drawn from that industry, was very great. General sentiment favored economic development. The idea of restriction had little root, and protection to cotton was not regarded as a purely restrictive measure.

Although Calhoun and others had defended the manufacturing system, the subject was still unsettled and strong opposition continued to appear. The system was denounced as intrinsically injurious and pernicious in its effect. The agricultural and commercial interests were politically the more powerful and were reluctant to permit the introduction of a third claimant. The nature of this opposition is aptly expressed in the following extract from a speech delivered in Congress in 1821.¹ "It is not to be wondered at that the advocates for the supremacy of the General Government should defend a policy which is calculated to aggrandize it by creating a new class of dependents, but it is greatly to be wondered at that the friends of States' Rights should ever have defended it. It can only be because they have not fully perceived its certain consequence. It is believed that no candid mind can fail to perceive that the effect of the manufacturing and its kindred systems will be to transfer a great portion of the wealth of the agriculturists to the other classes. If wealth is thus transferred so are the means of education, of knowledge, and consequently of power. The great influence which the manufacturers, scattered as they will be over the whole face of the country, must acquire will leave the agriculturists little hope that if they once assent to their system it will ever be revoked. Among the means by which their influence in the government must be increased, the facility which they must derive from our popular modes of election, of directing the suffrages of the persons they employ, is not the least worthy of consideration. This apprehension is not diminished by the consideration that their dependents, as we are told, will consist principally of foreigners. Nor is it desirable to undersell foreign manufacturers; for in order to do so, we must not

¹ *Ann. of Cong.*, 37: 1678-79.

only equal them in skill, machinery, ingenuity, industry, etc., but we must equal them in human degradation and wretchedness. We must drive our laborers from the fields to those dismal and demoralizing abodes where they sink into hopeless stupidity and penury; where health and morals frequently become victims to hard labor and to the laws of poverty and hunger."

Closely akin to this view was that of Barbour of Virginia,² who claimed that the manufacturer has no source of revenue but his labor, which he must constantly sell to a master; that not his own will but the will of his master was the rule of his conduct; that his condition was one of servility while that of the agriculturist is one of independence; and that physically the former is inferior. He argued that the interests of agriculture are identified with those of the community, while those of the manufacturer are not. Why should a class be created in society whose interests are opposed to those of the rest of society? We should not imitate Europe. Because she has been successful in manufacturing enterprise is no reason why we, with our comparatively sparse population, should attempt to follow a similar course.

These opinions are but typical expressions of the views of those who persistently opposed the introduction of the factory system. Others continued to argue along similar lines. In 1831 the popular demonstrations in favor of protection were, rightly or wrongly, ascribed to undue influence exerted by protectionists, while the condition of the operatives at Lowell and elsewhere was made the subject of attacks upon the manufacturing system.

Two main objections thus appear against manufacturing: first, the possibility that its development would eventually cause the political subordination of agriculture and of commerce. In this field of activity it was not to be trusted and it would attempt to tear down the original industries of the nation. It was feared that the laborers would be dependent upon the master manufacturer to such an extent that their political connections would also reflect their employer's views instead of their

² *Abridgement of Debates of Congress*, 6: 637.

own. It was claimed that the men would be driven to the polls and forced to vote in obedience to the wishes of their masters, and that their political independence would be sacrificed.

The other objection was based on moral grounds. This was urged at the very outset even before the factory system was established. In 1803 artisans and manufacturers of Philadelphia were sufficiently agitated over the charge that manufacturing industry was a breeder of vice vigorously to deny it in their petition to Congress. Furthermore they pointed to conditions in Europe where, according to their claim, crime was far more prevalent in commercial than in manufacturing towns. Protectionists defended the condition of the factory girls and attempted to minimize its disagreeable and unwholesome features. Placed upon the defensive, they refused to concede the disadvantages of the factory system. Again in 1827 the secretary of the treasury denied that rational moral grounds for objections to manufactures existed, nor would he admit that they led to physical deterioration.³ Pointing to Europe he said that the most enlightened, opulent, and powerful nations there had the greatest proportion of manufacturers to other classes, and that those countries having an undue predominance of agricultural population were the poorest.

The struggle against the factory system on these grounds virtually ceased before 1830 and no important objections to the natural growth of manufactures were urged. Economic conditions were forcing a rapid development of this industry, and the formation of a laboring class could not be prevented. It became useless to struggle against it. The best that could be hoped for was the prevention of an unnatural increase of this class by removing the artificial stimulations to industry. Other grounds than moral and political objections then necessarily became the bases of the more effective lines of argument against the protective tariff.

From the very beginning of the tariff controversies the fact of high wages gave the protectionists a vast amount of trouble. They had attempted to meet the difficulty and still continued

³ *Report on Finance, 1815-28, 390.*

in part to do so by urging the advisability of employing other than the ordinary labor engaged in the principal industries. This, however, did not suffice, and it became necessary to meet directly the contention that the wages of American labor were so high that our capital could not compete with that of foreign countries. Some of the objections, for example, made by free-traders to the system were enumerated by Matthew Carey as follows:⁴

The demoralizing effects of manufactures.

Injurious interference with commerce.

High rate of wages.

Vacant lands ought first to be settled.

In refutation of the claim that the price of labor was too high to permit successful manufacturing in the United States, he urged several important considerations: first, that numerous branches of manufacturing, in which manual labor alone was employed, had in consequence of public patronage arrived at perfection and prospered for many years; e. g., hats, boots, shoes, paper, books, etc. Of these products more than three-fourths of our consumption was supplied by the American manufacturer. Second, that even if labor were dear the objection would not apply to industries which employed considerable machinery, especially when the cheapness and advantage of our water power is given due weight. Third, that those industries employing the most machinery, aided by cheap labor and differing least from industries abroad needed protection. Finally, that the wages paid in England were, in many branches of industry, as high as those in America. In this connection he showed that the average wages of journeymen artisans and manufacturers in London were rated at thirty shillings per week, in other English towns at twenty-six shillings, and that boys of ten years and girls from twelve to fourteen years could almost maintain themselves. On the other hand, he pointed to the general unemployment of the period, to the fact that large numbers of people were at that time, (1821), working for their board alone, and to the enormous increase of paupers in New York and Philadelphia.

⁴ Carey, M., *Essays on Political Economy*, 430 ff.

These were formidable objections to the high-wage argument of the free-trader, but they were exceptionally strong and effective during the years of depression and up to the year 1824 when the tariff was revised in favor of protection. During the tariff debate of 1820 perhaps the greatest objection to protection, as far as the laboring classes were concerned, was based on the moral and political grounds of opposition already mentioned. The high price of labor was made less prominent than in prosperous times although protectionists were given both horns of the dilemma; that if wages were not higher here than abroad there was no need of protection, and if they were higher, then other industries must be more profitable.

By 1824 the tariff question had become more prominent. The West was solidly in favor of protection. The agricultural interests favored it, because they were searching for a market for their products, and the home-market argument was the strongest one that could be urged. The South had become strongly free-trade in sentiment, and believed that protection was a device to enrich the North at her expense. New England was almost evenly divided, the anti-tariff men having a small majority. New York and Pennsylvania were quite solidly for protection.

The importance of labor now began to assume greater proportions, as is natural with the increase of the laboring class. The high wages paid to labor again became the subject of heated controversy. An increase of the duty on iron was one of the objects that protectionists sought. Fuller of Massachusetts, in discussing this feature of the proposed bill, claimed that in the manufacture of iron our greatest expense was for labor, that no improved machinery could be made serviceable as a substitute for labor, and that for a century to come the population of our country could not reach such a state of redundancy as materially to reduce the rate of wages.⁵ Consequently success in manufacturing enterprise would be entirely out of the question.

McDuffie of South Carolina, who continued to figure for two decades in tariff debates, argued that, "In all those manufactures which principally result from manual labor; such, for example,

⁵ *Ann. of Cong.*, 42: 1706.

as iron—the high price of labor here, which is the most conclusive evidence of our prosperity, renders it impossible that we can maintain a competition with foreigners.”⁶ Our machinery, he said, was inferior; our capital dearer; and our experiment in the cotton industry gave little evidence of the value of protection. He made sport of the alleged unemployment which his opponents claimed prevailed in many parts of the country. All the idlers needed to do was to “go to work.” It was ridiculous to speak of wages at 12½ cents per day. Even in the poorest portions of the country, he would guarantee at least 50 cents per day. It was not distress but discontent which troubled our people. “The admitted fact that a common laborer in this country receives double the wages that a common laborer in the most favored nation of Europe receives, and labors little more than half the time, conclusively demonstrates the impolicy of protecting by duties those manufactures of the price of which labor is the principal constituent.”

Webster, at that time the chief representative of the commercial interests of New England, in a powerful speech on the tariff touched the same subject. Speaking of the alleged existence of idle hands, he said, “The price of labor is a conclusive and unanswerable argument to the idea. It is known to be higher with us than in any other civilized state and this is the greatest proof of all proofs of general happiness.”⁷ Replying to the statement that Swedish serfs make iron for us at seven cents a day, he asked whether we had any labor in this country that could not be better employed than in a business which did not yield the laborer more than seven cents a day. The real question was, could we produce the article in a useful state at the same cost or nearly so. The manufacture of iron was an unproductive business and we were not poor enough to be obliged to follow it. It would cost us precisely what we could least afford; that is, great labor. The manual labor of a country was limited and could not be suddenly increased. Machinery would do something to supply the deficiency but it was quite inadequate. Should we buy this iron and let our laborers

⁶ *Ibid.*, 2407 ff.

⁷ *Ibid.*, 2062 ff.

earn their greater reward or employ our labor in this line and tax the consumer for the loss sustained? In this speech, Webster struck deeply into the heart of the protection argument. He pointed out the economic difficulties in the way of successful manufacturing, and indicated the gain which would result from a free-trade policy.

Barbour spoke in a similar vein and declared that our high wages showed that other pursuits than the iron industry were more profitable if manufactures were unable to pay that rate. High wages, if business continued, meant prosperity; for laborers were in the majority.

An argument of a slightly different nature was that urged by Rankin.⁸ He opposed protection to manufactures, one of his objections being the injury that would be inflicted on laborers in other industries. He said there were 40,000 seamen, and that the shipwrights, boat builders, sail makers, chandlers, etc., whose labor depended upon prosperity in commerce numbered 250,000 or 290,000 in all. The interests of these men were at stake. The new system, even according to the speaker and with its possibilities greatly exaggerated, would not employ more than 500,000 men. Besides this a loss of \$7,000,000 of revenue would be incurred. Then addressing himself to the causes which determine the rate of wages, he added: "The price of labor is governed by the price for which the inferior soil can be cultivated, where they are compelled to cultivate such soil. The American farmer can, with the same labor, grow more grain than the farmer of any other nation. He can better afford to pay from 20 to 50 per cent. on goods of foreign manufacture than have his attention directed from agriculture to domestic manufactures. This state of things will pass away, when our population becomes too dense to be supported by the cultivation of the best soil, and to be employed in commerce. Whenever that period arrives, we are then and not until then prepared for manufacturing."

Williams of North Carolina and Poinsett both pointed to the condition of the English laborer.⁹ The effects upon him of

⁸ *Ibid.*, 2010 ff.

⁹ *Ibid.*, 2115, 2247.

manufacturing were extremely deplorable. Laborers worked from 14 to 17 hours per day. Wages were low, and when the laborers were thrown out of employment it was difficult to secure work again owing to the division of labor which prevailed and fitted a man for one kind of work only. The laborers were limited to a vegetable diet and extremes of wealth and of poverty were being produced by England's tariff laws. The poor, not the rich should be protected!

The contest was not confined to Congress, but the tariff was discussed by newspapers, publicists, merchants, manufacturers, and academic men. In argument and theory, however, they did not differ from the discussions in Congress. Thomas Cooper of South Carolina was one of the most ardent opponents of protection. On several occasions he wrote exhaustive economic discussions of the tariff question and replied in full vigor to the protectionist arguments based on high wages and unemployment.

Turning to the protectionist side of the controversy, we find that the argument in respect to labor is again emphasized and along lines similar to those advocated in previous tariff debates. Matthew Carey, as we have seen, denied the existence of high wages or tried to minimize their effect, but he did not favor a reduction of wages. However, there were those who saw in the lower prices for land and labor during the period of great depression, a greater opportunity for manufacturing industry to secure a foothold. The incentive to migrate westward was less while wages were at a lower level and more nearly within the ability of the manufacturers to pay.

Industry had rallied since the years 1819-20. Prices were better, and wages had risen again, but those of agricultural labor had gained very slowly. A writer¹⁰ in 1825 declared that the farmers and their laborers had been for years in a state of ruin and misery; only a single year had elapsed since they began to emerge from this state; and that the wages of the agricultural laborer were yet little more than half those of manufacturing laborers. Conditions were not uniform throughout the coun-

¹⁰ *Blackwood's Magazine*, May, 1825.

try. Transportation facilities were poor, and the immobility of labor and capital made distress possible in parts of the country while prosperity abounded elsewhere. Manufactures had made rapid progress in certain sections. The industry was growing rapidly in New England and in some of the middle states, especially Pennsylvania. Small plants too had been established in many parts of the West, thus furnishing a small home market for the farmer. But this was insufficient, and the agricultural interests, clamoring for a home market by means of the establishment of domestic manufactures, stoutly stood for a higher tariff. It was these interests which carried the day and secured the passage of the act of 1824.

Clay was the most powerful representative of the West and of the home market idea, but had to face all points of controversy in the tariff question. He emphasized the distress and prevailing hard times, especially those undergone by the people of the West, and lamented their misfortunes. In answer to the high wages argument usually made by free-traders, he replied: "The alleged fact of high wages is not admitted. The truth is, no class of society suffers more in the present stagnation of business than the laboring class. That is a necessary effect of the depression of agriculture, the principal business of the community. The wages of able bodied men vary from \$5 to \$8 per month, and such has been the want of employment in some parts of the Union, that instances have not been infrequent of men working merely for the means of present subsistence. If the fact were true that the wages of labor are high, I deny the correctness of the argument founded upon it. The argument assumes that natural labor is the principal element in the business of manufacturing. Inventions and machinery have produced a new era in the last few years."¹¹ He admitted that formerly the argument had great weight, but with the tremendous advance in the line of new machinery, labor had lost its former importance as an item of cost. Therefore the contention of his opponents had little value at the present time.

Wood of New York claimed that hands in sufficient number could be found to fill the establishments that would be erected

¹¹ *Ann. of Cong.*, 42: 1973.

for some time to come, and that the number would increase as they would be required for new employment.¹² In addition to this expression of optimism, however, he argued that the price of labor was relative, that it must be considered in proportion to the compensation obtained for other employments, and that the advent of machinery had done away with most of the difference. The additional price of goods would, on the other hand, not be an advantage for the manufacturer merely. The farmer would get part of the benefit in higher prices for the raw material, the laborer in higher wages and the manufacturer would get ordinary profits only.

Even Benton, from beyond the Mississippi—a friend of the home market idea—urged the development of manufactures and saw no danger in it for the American workingman.¹³ Clay had in 1820 spoken of the disinclination of many to emigrate to the West, and of the field this fact offered in the East for manufacturing industry. Benton's argument differed from this but had a similar end in view. He contended that too large a proportion of our population was employed in agriculture; that a surplus of agricultural products existed; that no market for these goods was forthcoming; that manufacturing had advantages here; and that attending circumstances were such as to save us from the demoralizing effects occasioned by similar establishments elsewhere. In other words, Benton pointed out the need of the growth of a manufacturing population, or laboring class, but depreciated the moral degradation which the opponents of protection asserted would necessarily accompany an extensive manufacturing system. On the other hand, eastern men quite naturally and logically exaggerated the disadvantages of migration to the wilderness, while hoping for the establishment of a manufacturing system to prevent the continued exodus from the East.

Protectionists furthermore emphasized the argument of unemployment wherever possible. The affected regions were wont to place stress upon this point. Factory districts which had not yet completely recovered cried out for aid. The tariff men of

¹² *Ibid.*, 2081.

¹³ *Ibid.*, 41: 693.

Philadelphia again pointed out the need of protection, after calling attention to closed factories and unemployed labor. Weavers in New York protested against the importation of British goods, and the mechanics of the larger cities demanded a greater degree of protection.¹⁴

The foregoing brief review of the principal arguments made in 1824 and previously in relation to the labor side of the tariff controversy, will serve to indicate the general nature of the problem, the economic conditions which obtained, and the points of departure for the subsequent development of the positions of the contending parties. It should be noted that free-traders had elaborated the following arguments:

1. The high wages paid in America preclude success in manufacturing industry.

2. The rate of wages is determined by the possible earnings of our western lands.

3. The application of highly paid labor to manufactures is an added cost to the consumer.

4. Our deficiency in machinery is too great a disadvantage to justify protective measures.

5. With the increase of population, according to the principles of Malthusianism, wages will eventually decline and then manufacturing can be successfully carried on.

6. The factory life of English workmen has made them a menace morally and politically, has injured them physically, and caused them to lead a wretched existence. America should not desire the addition of a similar population.

7. The interests of laborers in other industries should not be sacrificed in order to introduce a new industry.

8. The West offers a more inviting and profitable field for our workmen and as long as vacant lands exist the idea of considerable unemployment is absurd. There is, or can be, no large idle population.

On the other hand the contentions of protectionists may be briefly summarized under the following heads:

1. Manufacturing industry can secure considerable labor force

¹⁴ McMaster, *History of the People of the United States*, 5: 85.

through the employment of women, children, and such labor as can turn from its regular employment during periods of intermission. This argument was urged by Hamilton, Matthew Carey and others.

2. The rate of wages in America is not so high as is commonly assumed. When compared with that of Great Britain, the difference is not so great.

3. Our rapid advancement in the perfection of machinery minimizes the influence of high wages.

4. A large number of American workmen are out of employment. A higher tariff would secure work for them.

5. Manufactures would give employment to persons who disliked to migrate westward.

6. A large number of foreign immigrants, possessing skill of various sorts, would be attracted to our shores, and they would assist in developing and diversifying American industry.

7. The transition of labor from agriculture to manufacturing would increase our home market and enhance our general prosperity.

*174125: ...
Artificial ...
General ...*

CHAPTER IV

THE DEVELOPMENT OF THE LABOR ARGUMENT
AFTER 1824

The early protection period was preeminently the one during which protection to capital was both the actual and ostensible purpose of tariff legislation. Labor interests were involved but they influenced the current of events very little. They were passive factors subject to legislation, not active forces determining it. The tariff discussions ending with the Compromise of 1833, which concluded active controversy for a period, however, gave increasing attention to this phase of the subject.

Toward the close of the third decade of the century the public land question became increasingly involved in our tariff discussions. The Foote Resolution was an incident showing the connection between the two problems. The struggle of the western states for economic and political power had important bearings. Their increasing fight for preemption laws and a reduction in the price of lands was a significant fact. The West grew with tremendous rapidity, however, before these favors were granted; and drew a large part of its rapidly increasing population from New England and other eastern states. The latter were compelled to content themselves with a comparatively slow growth and they began to see the dawn of a new era when political predominance should be wrested from them and placed in the hands of the states of the West. Manufactures had made remarkable strides in the East, still the opportunities of the West lured men away. The labor supply was deserting the factory for the farm. The eastern states were quite solidly opposed to the legislation in respect to public lands favored by the western states. The latter were gaining too fast

in population. By 1820 Ohio had outstripped Massachusetts. During the following decade the North Atlantic states gained 27.5 per cent. but the North Central states 86.5 per cent. The New England states and New Jersey were slowly lagging behind. The South Atlantic states likewise were growing slowly. Hence to prevent the eastern states from becoming eclipsed, it was found necessary for them to hold their population. The manufacturing states believed the tariff would accomplish this end.

No one has stated this position more frankly than the ardent protectionist, Mr. Rush, Secretary of the Treasury, whom we have already quoted. In his Annual Report (1827) he says:¹ "The ratio of capital to population should if possible be kept on the increase. When this takes place the demand and compensation for labor will be proportionately increased and the condition of the numerous classes of the community become improved. . . . The manner in which the remote lands of the United States are selling and settling, whilst it may possibly tend to increase more quickly the aggregate population of the country and the mere means of subsistence, does not increase capital in the same proportion. The creation of capital is retarded rather than accelerated by the diffusion of a thin population over a great surface of soil. The further encouragement of manufactures by legislative means would be but a counterbalance and at most a partial one to the encouragement of agriculture by legislative means, standing out in the very terms upon which the public lands are sold."

As august a body of men as those composing the Convention of Friends of American Industry held at New York in 1831 dared to give expression to similar sentiments. In their memorial² to Congress they expressly stated that the establishment of domestic manufactures had the effect of restraining emigration from the settled to the unsettled parts of the country; that a protective policy would enable men to invest their capital and labor in manufactures at home instead of being compelled to

¹ *Report on Finance*, 1815-28, 405.

² *Cong. Documents*, 8: Appendix, 126.

emigrate and to occupy themselves in clearing land; that the tide of emigration would be checked throughout the settled parts of the Union and the population become more consolidated. At the same time they declared themselves as not opposed to the growth and prosperity of the West, and that the pursuit of agriculture alone was not conducive to the greatest prosperity. Besides there were other disadvantages to the people of the western states if their industry should remain undiversified. The same ideas took form and received expression in Congress itself. The real animus of the argument, however, was more hostile to the West than appears upon the surface.

The dispersion of our population was regarded as mischievous because it tended to weaken the East and add to the growth and power of the West. A protective policy which would equalize conditions so as to enable the eastern manufacturer to pay the wages demanded by the laborer, who would otherwise go West, received the strong adherence of the states principally affected. No wonder then that eastern protectionists were largely opposed to a liberal land policy, and that the latter drew upon the free-traders for much of the support it received.

This effort to swell the laboring population of the manufacturing states so as to permit the rapid growth of industry there, aroused the anger of western men. Anxious to develop their states, they looked with disfavor upon the retardation of emigration. Benton, who in 1824 had made an appeal for the laboring classes; who had stated that the laborer should receive a reasonable price for his labor and be enabled to procure the comforts of life and to educate his family; and who had conceded the disinclination of many to migrate to the unsettled portions of the country, now attacked the motives and principles of the protectionists who uttered sentiments such as those expressed above. He was opposed to methods which would prevent the free development of the West. Benton's attitude was a typical one, and western men, although the majority still remained protectionists, began to analyze the sectional aspects of the tariff question more closely. They were especially concerned with the disposal of our labor supply and while eastern

manufacturers were desirous of retaining it, the western men, on the other hand, were anxious to attract it to the fertile lands of the new states.

The intrusion of this phase of the tariff controversy indicates in a measure the straits in which manufacturers found themselves at the time of the tariff of 1828 and 1832. Many of them were under the necessity of reducing wages or shutting down their establishments unless timely protective duties came to their support. This pressure, in part, intensified opposition to western emigration, for the latter only accentuated the difficulties.

The arguments for and against protection continued to develop along the lines already indicated, although signs of change began to appear. The hope of protectionists that their policy would continue to attract immigrants still possessed vitality. Madison believed this to be a strong point and expressed himself to that effect. After declaring that protection called labor from the more to the less profitable industry, he remarked: "It loses that character in proportion to the effect of the encouragement of attracting skillful laborers from abroad. Something of this kind has already taken place among ourselves and much more of it is in prospect. It appears, indeed, from the general history of manufacturing industry, that the prompt and successful introduction of it in new situations has been the result of emigrating from countries in which manufactures had gradually grown up to a prosperous state."³ He then instanced the migration from Greece to Italy, from Italy to Spain, and from Flanders to England as proofs of his assertion. Even the Free-trade Convention of 1831 spoke of "the inducement it (protection) may have afforded to some skillful artists and operatives to emigrate."

Protectionists resented the term "restrictionists" applied to them, and naturally so when one considers their attempt to utilize a greater labor force than would otherwise be employed. In this connection the results which the textile industries secured

³ Letter of Madison to Jos. C. Cabell, Oct. 30, 1828. See *Free-Trade Advocate*, 1: 39-40.

were still advanced as weighty arguments. The Free-trade Convention was forced to take cognizance of this fact also and in its memorial said:⁴ "We are told . . . that the restrictive system is intended to bring into action a quantity of labor beyond what was previously actually put forth. That immediately employed in the protected branches is shown, by the result, to be on the contrary generally less productive than if applied to other pursuits. Yet there is an exception, which in some branches seems to alleviate the evil. The female labor employed in the cotton and woolen manufactures, appears from the rate of their wages to be more productive than if applied to the ordinary occupations of women."

The special attention given to the subject of wool and woolens by Congress and the country at large in 1827, 1828, and 1832; and the difficulties which many cotton and woolen manufactories experienced, continued to place emphasis upon the employment of women. Frequent charges, however, were made against this class of labor. Its weak points were constantly subjected to attack. Home was said to be the place for the "tender female." Girls should find employment in the dairy, kitchen, or on the farm. Factory life was uncertain. The operatives may be suddenly turned out of employment. The girls were held under strict subordination and helplessness. Arguments of this kind were indefinitely multiplied and had to be met by counter assertions from friends of manufacturing industry.⁵ The bright side of life at Lowell, indeed, made a profound impression. Foreigners such as Harriet Martineau, William Scoresby, and even Charles Dickens, who visited the mills, gave favorable accounts of our factory life. President Jackson, who was invited to Lowell, found it in gala attire and went away well pleased. The dark side, however, was a menacing one and the struggle of the cotton operatives was one of the incipient moves of American labor for a higher standard of life. This was to be reflected presently in the new turn which our tariff discussions began to take.

⁴ *Memorial of the Free-Trade Convention*, 19.

⁵ See: *Cong. Debates*, 8: 232; 407. *Free-Trade Advocate*, 1: 4; 2: 338, etc.

Free-traders continued to attack the argument on unemployment and to emphasize the high rate of wages. It was argued that wages would have fallen if many had been unemployed, but that wages were as high as formerly. Raguet admitted that there was some idleness in the cities where the new influx of foreigners was being felt.⁶ Time was required to distribute them, and meanwhile some of them were idle. Employment at moderate wages, however, could always be secured on farms, turnpikes, and canals, while permanent want of employment could not exist when tens of millions of acres of fertile land could be had for \$1.25 per acre. Agriculture could not be overdone. Any concession of idleness, however, gave the protectionists additional ground for their contentions.

During the period of 1827-1833 the causes determining the wages of labor were more carefully analyzed, the effect of protection upon the rate of wages was discussed, and the interests of the consumer were emphasized. In discussing the wages of workmen, one writer says: "Tariffs and monopolies cannot help them since their wages are regulated by the average rates of other labor which they must have whether their employers make or lose."⁷ The wage-earner is not benefited by the American system; the proprietors alone gather the advantage. Here we have pointed out the relation between the labor engaged in different professions and the cause of an average rate of wages. Barbour in 1824 had clearly indicated the primary cause determining wages in America, but he overlooked the accidental elements or disturbing factors which protectionists emphasized. Gallatin, seven years later, went a step further and said: "Wages are one of the elements of the price of commodities, and if higher in a country which nevertheless affords certain commodities at a less price than the country where the wages are lower, there must be a difference in climate, soil, skill, or some other circumstance which produces that result. But in each country the price is determined either by its productive-

⁶ *Free-Trade Advocate*, 1:3. Jan. 3, 1829.

⁷ *Report of a Committee of the Citizens of Boston and Vicinity opposed to a Further Increase of Duties on Importations*, 123. Boston. 1827.

ness or by the proportion between demand and supply in that country, and in no manner whatever by what may be that productiveness or that proportion in any other country, whether there is or there is not an intercourse between the two countries. . . . The price of labor is in each regulated exclusively by the respective proportion of supply and demand and the state of society."⁸

Strong as was this argument theoretically, it failed to meet the entire situation. In the East the labor problem was becoming an important one. It presented three phases. A large part of the factory operatives consisted of persons who would otherwise probably have remained unemployed, and, according to Newman, received a lower wage than the average paid to mechanics.⁹ Again after 1830, immigration became more important, the number of foreigners entering that year being 23,322, while that for 1832 was 60,482, against only 10,199 in 1825. Lastly, the East was desirous of retaining its male manual labor force, but recognized the necessity of paying good wages in order to succeed in this attempt.

On the other hand, the low price of cotton between 1830 and 1840 increased the activity of the South against the tariff and caused it to examine more closely into the effect of protection upon the northern states. These facts tended to confuse the arguments of free-traders on wages and labor, especially when theories were abandoned and the concrete conditions were discussed. Consequently free-traders were not united as to the effect of protection on wages. John Bell,¹⁰ in 1832, speaking of the South and Southwest said that these regions secured none of the benefits of protection either in higher wages or profits, but had to pay enhanced prices for the goods they bought from the tariff states. Another anti-tariff writer¹¹ (1828) said that a protective tariff had a necessary tendency to increase the price of labor generally, and also that of every article in proportion as it was the fruit of labor. Dew in maintaining that restriction

⁸ *Memorial of Free-Trade Convention*, 1831, 31-2.

⁹ Newman, S. P., *Elements of Political Economy*, 158.

¹⁰ *Cong. Debates*, 8: 41.

¹¹ *The American System*. Nathan Hale's Press, 1828.

prevented a fall of profits and retarded emigration, really admitted that it increased the nominal wages of labor. McDuffie, in 1830, said that the price of labor had fallen in the South but in the North, including all pursuits, had advanced during the preceding thirty years. Two years later Hayne exclaimed, "How can protection diminish the cost of production? What are the elements of price? Are they not the cost of the raw material—the wages of labor—and the interest of capital, and how can these be lessened by a tax on the article?"¹² In fact he and many other southern men held that the North was securing an advantage in prosperity at the expense of the South, and that the high remuneration of northern labor was largely paid for indirectly by the southern people. Other free-traders held similar views, but those of the North adhered principally to the theories of Gallatin and those formerly held by Webster, who was now being quoted far and wide by the opponents of protection.

The interests of the laborer were being considered from the standpoint of the consumer, but to a comparatively small degree only from that of a separate class demanding attention. The effect of protection upon the consumer was the chief consideration employed by free-traders in reply to the protectionists' emphasis upon the importance of the interests of the producer. The phrase "taxing the many for the benefit of the few" was current from the beginning of active tariff controversy; so with the charge that protection increased prices. The term "laboring class" was used very loosely, but McDuffie in 1824, with more precision declared that the laboring class would be sacrificed for the benefit of the capitalists and that the question lay between those who produce more than they consume of the articles subject to duty and those who buy the surplus production.¹³ Writers and speakers furthermore declared that the American system robbed the laboring classes for the benefit of the idle and taxed the poor for the benefit of the rich.¹⁴ The

¹² *Cong. Debates*, 8: 92.

¹³ *Ann. of Cong.*, 42: 2421.

¹⁴ *Banner of the Constitution*, 2: 38 ff.

Free-trade Convention of 1831, however, less moved by demagogues or by the excesses of southern opinion, dispassionately discussed the question in the following manner: "It is clear that the mechanic who pays twenty dollars more for the implements of his trade, the necessary clothing of his family, and the sugar it consumes, must either enhance the price of the products of his industry in the same proportion, or receive so much less for his labor. The nominal wages, of the journeymen and of the laborer, do now remain the same, whilst the true price of their labor, the compensation they actually receive, has been lessened to an amount precisely equal to the enhanced price of the necessary articles they must purchase."¹⁵

The distinction between the real and nominal price of labor is clearly brought out in this extract and also the bearing of higher prices upon the wages of the labor not engaged in an industry receiving protection. On the other hand, coming from the laboring man himself, we have a severe arraignment of the protective system as then in operation. Writing to the chairman of a meeting of working men in Boston, Seth Luther, formerly a carpenter, said that manufacturers had called him spy, agitator, etc., that he had exposed the unrighteousness of those who imported foreign wool to reduce the price of wool to our farmers; foreign workmen to cut down the wages of American citizens; and foreign machinery to throw our own machinists out of employment; and who still pretended to support American industry.¹⁶ Such sentiments were followed in 1837 by petitions from one thousand to two thousand of the laboring class and poor of Boston for a repeal of the duty on coal, and from the inhabitants of other towns for similar relief.¹⁷ The Senate committee on manufactures in a report of that year admitted the high price of American labor but claimed in addition that the injustice and oppression of protection falls almost entirely upon the poorer classes. These facts and arguments are typical of this transition period. They show the in-

¹⁵ *Memorial to Congress*, 49.

¹⁶ *Address to Workmen*, 4.

¹⁷ *24th Cong., 2nd Sess.; Sen. Docs., 2: No. 102.*

fluence of a one-sided southern opinion upon the labor phase of tariff controversy. The effect of agitation by tariff reformers of the North is likewise important and leads to a maturer consideration of the theoretical aspects of the question. The increasing importance of the laboring class in politics adds to the current confusion which is only to be cleared away by antagonism to the newly developing theory of protectionists in respect to pauper labor.

Turning now to the growth of protectionist doctrine after 1824, we find that an important evolution is taking place. Our manufacturers are still contending with certain disadvantages, among them, the high price of labor. Woolen manufacturers during 1827 and 1828 were especially discontented and asked for higher duties on woolen goods. The Harrisburg convention of the former year took the position that a nation whose labor was dear could not without ruin carry on commerce with one whose labor was cheap. Machine industry, however, was making rapid progress, and 10,020 patents were issued between 1790 and 1836. Under such conditions the more eager and optimistic protectionists agreed with Rush in his annual report of 1827 that: "The time has passed when objections might be made to manufactures from the limited amount of our population and the dearness of labor. Population in many parts of the Union is sufficient for any operations of manual labor, while science by applying its inventions to this kind of labor has abridged its expensiveness."¹⁸ In Congress protectionists were wont to take a similar view. Young¹⁹ of R. I. admitted that there were considerable differences in the case of the wages here and abroad of agriculturists, mechanics, sailors, etc., but that foremen and overseers were paid higher wages in England and that we employed proportionately more women and children. Moderate protectionists, such as Professor Newman of Bowdoin College, advanced the same argument and even the free-trader Raguet said that the wages paid to cotton and woolen employees could not be so high as that paid in certain other lines because less

¹⁸ *Reports of Finance*, 1815-28, 399.

¹⁹ *Cong. Debates*, 6: 900.

manual labor, skill, and intellect were required and the number of competitors would be greater. Everett and Davis of Massachusetts both began to minimize the wage difficulty but soon advanced to firmer ground. That the argument relative to the comparative dearness of American labor was not dead is evidenced by the fact that in 1837 free-traders still referred to it, and occasionally protectionists did likewise. As late as 1840 the anachronistic Governor Ellsworth of Connecticut declared that unless the eastern states could sustain themselves by their manufactures they were destined ere long to lose their importance; that he did not believe that wages could be much reduced even if attempts were made; that the laborers would otherwise go West; and finally that we had not really suffered from high prices and wages.

This species of argument had lost its weight by this time. Powerful as it had been once, it was always a negative argument as far as labor was concerned. It was urged to prove the need of protection to capital and offered nothing directly for the benefit of the laboring class. It is to the positive side of the labor argument therefore that attention must be turned in order to understand the growth and evolution of the later doctrine. The necessarily increasing concern for the laborer and the theories relating to him prompted the development which culminated in the present high wage doctrine.

Protectionists continued to exploit the subject of unemployment to a considerable extent.²⁰ In 1830 Raguet said, "The doctrine that there are in the United States a vast number of persons who can not procure employment has long been a favorite one with the restrictive party." Similarly he quoted Clay as claiming that protection was invaluable to the laboring classes because it increased and multiplied the demands for their industry and gave them an option of employments. Clay did, indeed, frequently refer to the subject of distress and later (1832) maintained that protection extended to almost every mechanical art. As a western man, however, he took the subject of labor less seriously.

²⁰ *Principles of Free-Trade*, 46.

Niles pointed out the supposed value of protection in the following words: "The nature and tendency of the American system is to encourage the laboring people, the free men and the free women of the United States, and by rendering the means of subsistence more certain to promote marriages, and to relieve the fear of the poor because of increase in their families."²¹

Young showed that wages for laborers on the wharves were as high in 1832 as in 1816, and maintained that the American system benefited northern labor. Sprague²² in the same year argued that in every tariff adjustment, primary regard should be had for the interests of the laboring classes of the community and that two problems arose in that connection; first, the giving of employment to those who would be without it otherwise; second, the problem of how to make labor more productive and profitable. That system, he said, was best which gave to labor the greatest amount of comforts and conveniences. Robbins of Rhode Island²³ made an appeal for manufactures, claiming that they made a demand for labor and resulted in improving the condition of the laboring classes. Evans,²⁴ a New England congressman, devoted a large part of his speech to the subject of labor. Protectionists had become alive not only to the bright side, but also to the oppressions of English factory life. He said that these oppressions did not arise from protection but that this policy had fostered and encouraged our labor and industry. The laboring classes were the largest part of our population and the more they received the greater would be our prosperity. Denny of Pennsylvania claimed that the product of foreign labor thrown into our markets would impair our industry and deprive our laboring classes of the means of subsistence, or drive them into agriculture. Other eastern protectionists, such as Stewart and Davis, emphasized the subject of labor in 1832, but the character of their argument was more modern and will receive attention in a later chapter.

²¹ *Niles' Register*, 35: 316.

²² *Cong. Debates*, 8: 604.

²³ *Ibid.*, 493.

²⁴ *Ibid.*, 3422.

In 1831 a convention of protectionists was held at New York. In their address they declared that, "It is to rescue the labor of the American people from an inferiority—a subjection at once dishonorable and burdensome, at once degrading to its character while it increases its toils—that those very laws (protective) were originally passed, have all along continued and now exist. . . . It is thought to be a wise policy to multiply the inducements to apply capital to the employment of labor at home rather than to purchase abroad and traffic in commodities of foreign production, by which the capital of the country is made to set in motion foreign labor. The American system offers security and inducement to American capital and gives employment and vigor to American labor. Labor is not the mere instrument of capital but an intelligent, active principle. The stimulus to labor can be increased by applying capital to home production. We believe that while it benefits all, its highest recommendation is found in its beneficial action upon the many—the laboring classes—the working men. Our system tends directly to increase the effective power and remuneration of labor, thus multiplying the means, the comforts and enjoyments, of the laboring classes and raising them in the scale of civilization and social life."²⁵

Webster as early as 1831 declared himself in favor of protection to labor, and pointed to the influence of mechanics in securing the adoption of the Constitution and its relation to protection. He began to appeal to mechanics to support the protective policy, and in 1833 he said, "Nothing can be worse than that laws concerning the daily labor and the daily bread of whole classes of the people should be subject to frequent and violent changes. A just and a leading object in the whole system is the encouragement and protection of American manual labor . . . "²⁶ At a later date he called attention to the protected workmen of Connecticut—those engaged in the hat, tinware, and woolen industries. The ends to be obtained by protection were to secure steady employment to brawny arms and indus-

²⁵ *New York Convention of Friends of Domestic Industry*, 7, 18 ff.

²⁶ Webster, *Works*, 1: 283.

trious hands. "The free labor of the United States deserves to be protected. The true way to protect the poor is to protect their labor."²⁷

Men like Buchanan from states possessing industries affected by a reduction of duty, such as coal, iron, cotton, woolen, etc., began more and more to emphasize the subject of protection to labor. It was largely a question of maintaining men at their employment and the difficulties which would ensue, were protection withdrawn; while the comparison between the European and the American laborer and the probable degradation of the latter were more sparingly dwelt upon. The really important argument which protectionists had developed and exploited during the controversies of 1828, 1832-33 and 1837 was the increased employment at remunerative wages which protection would afford. Undeniably many eastern men desired to use protection as a means of preventing emigration and western men hoped to build up manufactures to strengthen their home market, but the general principle as stated above remains true. In addition it was continually claimed that protection did not raise prices because competition would force them down; that therefore the laborer did not suffer.

In the above chapter we have traced the evolution of the labor argument for, and that against, the protective tariff during the first protective period; we have pointed out the characteristic features of the argument and the underlying causes for the same; but we have omitted the discussion of the subject of pauper labor, which was already mentioned at this time. It was, however, not the typical nor characteristic argument of the period, and only received general attention later. Therefore we shall treat the early stages of its development in connection with the general evolution of the doctrine.

²⁷ *Cong. Debates*, 13:1, 959-960.

CHAPTER V

FACTORS AFFECTING THE LABOR ARGUMENT

In order to understand more clearly the development of the pauper labor argument it is necessary to suggest briefly several facts and tendencies of this period of history. These in themselves are not closely connected with the tariff question, but indirectly they are largely responsible for the emergence of this phase of tariff discussion. Among these movements is the one which concerned itself with elevating the standard of life of the American workingman.

The debates in Congress between 1816 and 1825 show little sympathy for the aspirations of workingmen. The theory of Malthus influenced American statesmen to no inconsiderable extent. The problem, however, was not regarded as an imminent one, but the belief existed that wages would eventually decline. Rankin¹ in 1824, while contending that manufactures could not be successful, said, "This state of things will pass away when our population becomes too dense to be supported by the cultivation of the best soil, and to be employed in commerce. We are then and not until then prepared for manufacturing." Both protectionists and free-traders spoke of the time when wages would no longer be too high to prevent the development of industry. The following extract also indicates the point of view, "The high price of labor will be a barrier against home manufactures and the establishment of a general system of manufacturing would create a new demand for labor and increase the 'evil complained of.'"² The constant dissatisfaction

¹ *Ann. of Cong.*, 42:2010.

² *New York American*, August 7, 1819.

with the "dearness of labor" reflects a wide-spread attitude, which changed, however, with the advent of the pauper labor argument. Although free-traders were charged in 1832 with holding that the natural price of wages was the mere subsistence of the laborer, many of them had begun to believe in the importance and dignity of labor. It must not be forgotten that the chief free-trade leaders were southern men, accustomed to an atmosphere of slavery. Occasionally invidious comparisons between free and slave labor were made. Protectionists, on the other hand, were forced by the laborers themselves to recognize the upward pressure of the masses.

Turning to the movement among workingmen, we find that considerable organization prevailed among journeymen mechanics before the tariff became a live issue in 1816. The conspiracy cases at New York, Philadelphia, and Pittsburg point clearly to this fact, and to the objects which labor intended to accomplish—higher wages and the employment of union men. In 1819 a writer refers to the "habit of associations among our workmen to enhance the price of labor."³ The crisis of that year impaired the development of organization among the laboring men but by 1825 a self-conscious activity again strongly manifested itself.⁴ Thousands moved to the West and the remainder struggled for greater advantages in the older states. An attachment to city life and the indisposition to emigrate restrained large numbers from leaving their old homes. The struggle now began to include a demand for a shorter work day. Various newspapers proclaimed the cause of the laborer and the *Mechanic's Free Press*, a labor publication conducted at Philadelphia between 1828 and 1831, did valiant service for the cause. The *Workingman's Advocate*, published in New York City from 1829 to 1835, also upheld the interests of labor.

The labor difficulties in the textile industries after 1828 materially affected the struggle for better conditions. In 1829 from 600 to 800 girls employed in a single cotton factory at Dover,

³ *Ibid.*

⁴ Ely, *Labor Movement in America*, 40.

New Hampshire, struck on account of stringent regulations.⁵ They failed, but the lesson of cooperation was being taught. Strikes and combinations to prevent lower wages were common. The current of events is well illustrated by the view in respect to the social conditions of the time as expressed by a labor convention held at Boston in 1831. "The social evils arise from an illiberal opinion of the worth and rights of the laboring classes; an unjust estimation of their moral and intellectual powers; an unwise misapprehension of the effects which would result from the cultivation of their minds and the improvement of their condition; and an avaricious propensity to avail of their laborious services at the lowest possible rate of wages for which they can be induced to work."⁶

Whatever causes tended to depreciate the opportunities of the workingmen were held in disfavor. This accounts, in part, for the opposition to the Irish in New England. A large number of New York laborers feared that their wages would be reduced if 100,000 foreigners came to America annually.⁷ The rapid improvements in machinery also tended to displace American workmen to some extent, and produced considerable discontent.⁸ Seth Luther again voiced the opinions of this class of men, although the actual suffering from this cause was not great. An example of the attitude and purpose of the laboring classes is typified in the address to the public made by the working people of Manayunk, Pennsylvania, in 1833—a year which marks the beginning of a more vigorous trades' union movement.⁹ They objected to a thirteen-hour day and opposed the attempts of employers to reduce their wages twenty per cent. because cotton had risen in value. They complained that their wages were barely sufficient to supply them with the necessities of life, and that their children were as much oppressed as those of English factories. With reasonable hours and wages their children could be properly educated. The female workers, they asserted,

⁵ *Free-Trade Advocate*, 2: 73-4.

⁶ Casson, H. N., *Organized Self-help*, 144.

⁷ Meyers, *Tammany Hall*, 159.

⁸ Simpson, Stephen, *Working Man's Manual*, 133.

⁹ *Examiner*, 1: 54-5.

were subject to the same burdens. Furthermore they desired to hear from the different trades' unions of the United States in regard to their regulations, etc.

The appeal to other trades' unions indicates a rising bond of sympathy among the laborers and the growth of concerted effort toward higher standards. In a similar way a Labor Convention at New York in 1834¹⁰ resolved "that we recommend to the several Trades' Unions in the United States to oppose resolutely every attempt to reduce their wages, and to hold fast any additions they may receive." The great grievance of the unions, in fact, was said to be "inadequacy of wages," although they sometimes asked for a reduction of hours. Long hours and child labor, however, were important evils in the textile industries. Out of 57,000 persons employed in 12 states in cotton and woolen mills, 31,044 were, according to Luther, under 16 years of age, and 6,000 under 12. To relieve these grievances in addition to the others mentioned was no easy matter and largely accounts for the ceaseless struggles of the factory operatives. Measurable success here was attended by a general elevation in the standard of life.

The movement to secure higher wages was given additional momentum by a change of judicial attitude toward conspiracies. The customary decisions against the legality of conspiracies made it difficult for organized labor to secure even ordinary demands. Several decisions however, in 1836 in favor of the defendants in cases of this kind gave encouragement to the friends of labor, made organizations more effective, and aided the workingmen in their struggle for better conditions and higher wages.¹¹ This year marks the climax of the trades' union movement of the decade.

The increasing prosperity of the laboring classes was suddenly checked in 1837 by the obtrusion of a financial crisis. Short crops in 1836 and the paper inflation of the period had raised the prices of necessities to stupendous figures.¹² Flour

¹⁰ Potter, A., *Political Economy*, 264.

¹¹ *Philadelphia Public Ledger*, July 2, 1836.

¹² Parton, J., *Life of Jackson*, 312.

sold at \$16.00 per barrel, and hardships were impending. Many manufacturers were compelled to dismiss some of their workmen, and large numbers of mechanics began to suffer from want. A mob in New York cried out for lower prices for bread, meat, rent, and fuel and then destroyed 1,000 bushels of wheat and several hundred barrels of flour.¹³ The action of the Government in calling in gold and silver, together with the Specie Circular precipitated the crisis, and in a few months failure and distress were general. To what extent the prevailing low tariff was a contributory cause is uncertain, but many believed it to be a cause and seized upon this psychological moment to promote the interests of protection.

The growing distress suspended factories and mills and thousands of men were thrown out of employment, and enjoyed no means of subsistence. Many labor organizations collapsed and numbers of energetic men and women asked merely for help to secure work. Hundreds of laborers were dismissed from farms and country places in the fall of the year and found themselves without work.¹⁴ In the early part of 1838 one-third of the 200,000 persons in New York City who subsisted by manual labor were said to have been wholly or partly out of employment.¹⁵ Ten thousand persons were in utter poverty. Manufacturing, building, and business had enormously declined. The distress here and elsewhere continued for several years and was heavily felt in 1842. Pauperism was still so widespread that during the winter of 1841-42 it was estimated that from 30,000 to 50,000 people were destitute of the means of a week's comfortable existence, while the alms houses were full and overflowing.¹⁶ The large number of mechanics and laboring men out of employment faced a gloomy future. Many of them migrated westward and others were desirous of going, but found it difficult to move. Many were not sufficiently informed concerning the West and had not the hardihood to go; at the same time depressed conditions from which relief was sought obtained

¹³ *Niles' Register*, 51: February 18, 1837.

¹⁴ Greeley, *Recollections*, 144.

¹⁵ *New Yorker*, January 20, 1838.

¹⁶ *New York Tribune*, January 8, 1842.

there as elsewhere. The migration of Mormons from Missouri to Illinois, for example, was investigated and the conclusion drawn that "these people have no design to lower the wages of the laboring class but to procure something to save them from starving."¹⁷ The attitude of the people, however, is no less plain, and certainly the competition of the unemployed had temporarily reduced wages.

The conditions in manufacturing industry were deplorable. Pennsylvania complained on account of the closing down of iron works and the unemployment which it occasioned. Manufacturers of leather, hats, and wares of various kinds were seriously affected. Many cotton mills,¹⁸ says Bishop were about to close. They had several times reduced the wages of their operatives and were now waiting for Congress to revise the tariff. Other industries were disturbed and laborers dismissed from employment. Such conditions justified the Central Committee of Home Leagues in calling upon unemployed operatives to meet in their respective districts to consult together and devise means of relief. A new impulse was thus given to the protective tariff.

Manufacturing industry had now grown to considerable proportions in the United States. The number of persons employed in manufactures had risen by 1840 to 791,749. In the New England states the proportion engaged in this industry had risen from 21 per cent. in 1820 to 30.2 per cent. in 1840, and in the Middle states from 22.6 per cent. to 28 per cent. respectively. Furthermore these two divisions now employed 65.8 per cent. of the persons in the United States engaged in manufacturing and 52 per cent. of those occupied in mining. The total value of the product was \$239,836,224 for manufacturing and \$42,358,761 for mining.¹⁹ In the former industry, New York, Massachusetts, and Pennsylvania led, while the latter state was easily the first in mining, iron and coal being the chief products. These facts show how important these industries were at this time in the eastern states, and what a blow commercial

¹⁷ Bancroft, H. H., *History of Utah*, 137.

¹⁸ *History of Manufactures*, 2: 421 ff.

¹⁹ Tucker, George, *Progress of the United States*, 205 ff. Also *Census of 1840*.

depression was to the people of this section. Not all of the industries, it is true, were greatly depressed, but the rather general nature of the crisis operated to cause men to look to the tariff for a remedy even though the latter should act directly on certain industries only.

The growth of idealism and humanitarianism in America during this period of struggle for the laborer united with other movements to affect the new attitude toward labor and toward the protective tariff. Owen had begun his cooperative experiment in 1825. Labor stores were established, and agitators continued to inflame the workingmen. Their right to the whole product was asserted, and many of our eminent men were captivated by utopian schemes for social betterment, of which Brook Farm is an illustration. Horace Greeley, Albert Brisbane, George William Curtis were representatives of this movement. The old theology, on the other hand, tended to content men with their lot however humble, but the humanitarian movement began to emphasize the dignity of labor and the worth of man. William Ellery Channing typifies the new school in insisting upon the development of the individual.²⁰ He strongly advocated the elevation of all classes of citizens. In 1840 he pointed out the questionable effect of bringing the European laborer nearer to the American as improved steam navigation would assuredly do. He deplored the possibility of a competition which would depress the laboring classes of this country. Could our workmen stand their ground, he asked, against the half-famished, ignorant workman of Europe? Was there no danger that degradation such as that found among the overworked operatives of her factories and among her half-brutalized peasants would follow closer connections with Europe?

Other New England divines likewise stood for the elevation of the working classes. Philanthropy was gaining ground, and the intellectual and moral progress of the laborer received more attention. Such doctrines as these and the sympathy and aid of noted men of the hour naturally gave an additional impetus to the labor movement, and when these ideas took a political

²⁰ *Log Cabin*, July 18, 1840.

turn the relation between the tariff and the laborer became a subject of more extensive investigation and importance.

The immigration of foreign laborers and of many paupers began to cause some dissatisfaction. Massachusetts, in 1836, through its legislature asked Congress to pass a law to prevent immigration of foreign paupers. The municipal authorities of the large seaboard cities likewise called attention to the subject and Congress made an investigation in 1838. The committee in charge reported against the admission of paupers, vagrants and malefactors, and deprecated their blighting influence upon our population, especially upon the laboring classes. The question was not yet a sufficiently serious one and nothing was done. In 1842, however, the *New York Tribune* maintained that on account of immigration the supply of manual labor in that city would probably exceed the demand, and the price of labor compared with the cost of living would consequently be lower than in the rest of the country.²¹ Immigration, on the contrary, could not glut the market and depress wages, as was popularly imagined, so long as the tariff was so adjusted as to preserve a proper proportion of manufacturing to agricultural labor, although at the points of disembarkation a temporary glut might be occasioned. Such utterances indicate the existence of local aggravation and show how opposition to the foreigner could take the less objectionable, although less logical, form of a demand for higher duties upon the products of foreign labor. Seth Luther had more boldly objected to immigration on the ground that this was the proper way of protecting American labor, but views of this kind were not extensively proclaimed.

The economic advancement of the working classes found its parallel in their increased political activity. Before 1828 the laborer was not considered an important factor in politics, although Tammany had made occasional concessions to secure his vote. In 1827 a workingmen's party originated in Philadelphia, and it polled a considerable number of votes besides securing the election of a number of its candidates but the movement subsided in 1830. A large number of workingmen

²¹ *New York Tribune*, July 23, 1842.

had begun to realize that many reforms were needed for the elevation of their class and that their interests were receiving but little attention. An adequate system of public education, mechanic's lien laws, and other measures were advocated. A class consciousness had arisen and a difference of interests between master and journeyman mechanics was recognized. It was resolved to gain the reforms by embarking in politics on an independent basis, but the shrewd machinations of old political leaders eventually disrupted the new party, although not without concessions on their part.

In 1829 the workingmen organized a party in New York City,²² the demand for a mechanic's lien law having failed. Matthew Carey's efforts in favor of the seamstresses had likewise stirred the laborers, who appointed a committee to investigate the condition of the industrial classes. The complaint became current that while the laborer remained poor his master was becoming rich. The new party met with some success and soon both Whigs and Democrats began to develop interest in the workingmen. In 1830 a Clay Workingman's Ticket, which favored a protective tariff, was nominated, while Tammany stood ostensibly for the cause of democracy.²³ The movement spread to various cities. In Baltimore the workingmen nominated candidates for members of the state legislature in 1833, while in Boston they pledged themselves to vote only for men favoring their measures of reform.²⁴ The independent movement, however, lacked stability and permanence. It was short-lived although occasional outbreaks continued to occur. But it had not failed. It forced the regular parties to give attention to both the laborers' votes and policies.

The Democratic party absorbed the larger part of this vote and the heavy support received by Jackson in the eastern states is largely due to the favorable attitude of mechanics and workingmen. The laboring classes in fact forced that party to indorse and support many of its measures. The Democrats catered

²² McNeill, G., *Labor Movement*, 75.

²³ Meyers, *Tammany Hall*, 97-9.

²⁴ *Niles' Register*. 45: 49.

less to property than did the Whigs, and thus naturally found more favor among the working classes. But elections can not be won without votes—a bit of wisdom which the Whigs soon realized. Bancroft, the historian, thought the day for the multitude had come, that the mechanic and the yeomanry were now to lead the march of progress. They had indeed made themselves heard and given new direction to economic and political tendencies.

The advent of the laborer in politics created new political turmoil. Laborers in mass meeting indorsed or disapproved of candidates for office. The friendship of Van Buren was distrusted. During the campaign of 1840 he was forced to reply to questions concerning his attitude toward the protective tariff and a reduction of the standard of wages. He had inaugurated the ten-hour day in Government establishments, yet laborers were dissatisfied, and he was made the scape goat for the prevailing ills and depression. The debate on the sub-treasury and on hard money in 1839-40 plainly indicates the rising importance of the laboring class. In 1824 such arguments as were now made would have been absurd. The adoption of the system, it was claimed, would reduce the wages of the laborer, and bring him to the level of his foreign competitors. The emphasis placed by its Whig opponents upon this cause for opposition is both significant and comprehensible. The resemblance between this argument and the labor argument for protection in 1842 is another striking fact. Harrison, on the other hand, was hailed as the "Poor Man's Friend" and the Whigs appealed to all classes of society. Charges against the aristocratic proclivities of the leaders of opposite parties were common and were weapons employed to capture the labor vote. The conversion of laboring men from one party to another was given adequate newspaper notice, while their views and arguments were used to best effect. The political importance of the workingmen was distinctly recognized, a fact which necessarily affected the public and ostensible position of each party on the leading questions of the day.

A number of considerations therefore arose which contributed vitally to the growing importance of the high wage argument for

protection. The rapidly rising standard of life of the American workmen was gaining a momentum which could not be resisted. A rise of wages, not a diminution in the price of labor, was coming to be regarded as the just and permanent hope of the laborer. The social movements of the hour gave impetus to the struggle of labor. The effect of immigration upon the laborer was viewed with some alarm. The political activity of the working classes roused the old parties from their lethargy and called forth their reluctant attention to current social problems. Mechanics and workingmen held legislators to a more rigid accountability. The relation between new legislation and their own interests was extensively studied. The crisis of 1837 gave new cause for complaint and the popular preference for higher levels of prices was reflected in the opposition to a reduction of the nominal wages, entirely apart from the effect on its purchasing power. The struggle of the East against the West to retain its economic prestige necessitated new concessions to the workingmen. Finally the existence of slavery served to strengthen the defense of the wage system. The parallel growth of these movements and the political tension which they produced profoundly affected the discussion of the tariff. The older attitude could no longer be maintained, and the argument on the subject was therefore co-ordinated with the new ideas, ideals and conditions which obtained. The years 1841-42 seemed to be the culmination of the tendencies to which we have referred. Consequently a new importance was given to the pauper labor argument, the development and growth of which will be traced in the ensuing chapter.

CHAPTER VI

THE RISE OF THE PAUPER LABOR ARGUMENT

In tracing the labor argument in respect to the protective tariff, we have noticed several lines of development: First, protection afforded the advantage of adding to our available labor supply in manufacturing industry. This argument declined in importance with the growth of the factory system and the increase of immigration. In the second place, protection was necessary to support capital against the comparative dearthness of American labor. As long as a rapid increase of the population and a concomitant decline in the rate of wages was regarded as inevitable and was viewed with complacency, so long this argument carried weight. But with the growth of the popular demand for a higher standard of life it lost its force. Thirdly, the argument that protection would give employment to the unemployed was uttered with tremendous volume during and after the crisis of 1819-20. The argument continued unabated, changing somewhat so as to embrace a policy which would insure the employment of American laborers. Buchanan in 1837, speaking of the laborers in the coal trade, said, "Their rights ought to be protected. To throw them out of employment for the benefit of foreign labor would be both cruel and unjust." The main idea is security of employment and nothing is said concerning competition with the low wages of foreign labor. The speaker had not developed that thought. It was not an essential part of the argument. Finally, the claim that protection would retard migration westward rested necessarily upon the inferences that it would give steady employment and maintain the current rate of wages.

Closely allied to the last two arguments, and naturally developing out of them into a new and more positive doctrine, was the idea that protection was needed against the pauper labor of Europe, to prevent American wages from falling to the level of the latter. This theory received its impetus from the economic, social, and political conditions which prevailed during the period of its early development. Furthermore the reaction toward free-trade, beginning with 1828, created conditions which naturally led to a comparison of American with competing labor. While the tendency had been toward a higher tariff the need for this study had hardly suggested itself, but the removal of certain duties brought in the consideration of the actual effect upon American laborers and stimulated the comparison with European labor. One of the first intimations of the new line of development is found in the remarks of Bates of Massachusetts in Congress in 1828.¹ He gave expression to the following sentiment: "If you hope, therefore, to maintain our system of Government, you must maintain the people at the elevated standard of living, and, as entirely dependent upon it, of moral and intellectual culture which they now hold. This you cannot do if you bring the day laborer, who must earn his \$.75 to feed, to clothe, and to school his children, into contact and competition with him who will work for six pence sterling, because he wants and cares for none of these things and because six pence will answer all his purposes."

Between 1828 and 1830 the low wages of seamstresses in Philadelphia attracted considerable attention. Matthew Carey estimated that 12,000 women in Boston, New York, Philadelphia, and Baltimore were eking out a precarious existence by the use of the needle and he made strong efforts to ameliorate their condition. He tried to secure a higher rate of wages for them through organization, advocated a greater variety of employments, and even suggested migration to the West. These conditions subsequently became a subject for more discussion in connection with the tariff; so that the relation between tariff and wages began to assume greater importance.

¹ *Cong. Debates*, 4: 2014.

In 1831 in an address before a society of workingmen, the following view was maintained: "We import from other regions where the work is still performed by serfs or slaves and thus bring the hardy yeomanry of our own land, as well as our skillful manufacturers and mechanics, into a ruinous competition with those unfortunate fellow beings of other lands and countries. If one portion of them is oppressed and forced to toil for naught the produce of their labor is employed as a means of depressing the prices of their brethren in other lands. These products are sent here or elsewhere to be offered in competition with similar products of the labor of other men. No wonder then that when all the workingmen of Europe, Asia, and Africa are in a state of comparative slavery, that we of America should find it necessary to interpose the strong arm of Government to protect and cherish our own industries."²

That very year a petition to Congress from manufacturers of leather, boots, and shoes stated that a reduction of the duties would aggravate competition with France where wages were low. The petitioners could hardly live now and did not want their wages reduced. The contemporaneous riot at Lowell between Americans and Irishmen called forth the comment that our native workmen would be driven out of manufacturing by the incoming foreigners unless they would work sixteen hours per day and for a few shillings a week. Thus we see that the competition of immigrants was already regarded with some disfavor and the attendant effects were discussed. It required only another step to compare the foreigner engaged in his occupation at home with the American laborer employed in a like trade and to oppose competition upon equal terms.

In 1832 the subject received considerable attention from representatives of Massachusetts and Pennsylvania, states which possessed a large labor population. John Davis declared in Congress that,³ if protection were abandoned, manufacturing must cease or our wages be reduced to the standard of England

² Whitcomb, Samuel Jr., *Address before the Workingmen's Society of Dedham*, Sept. 7, 1831.

³ *Cong. Debates*, 8:3309.

and Ireland, and our labor be brought into competition with the cheapest labor of those countries; that the policy of the advocates of free-trade was to reduce wages; that he opposed such a policy; and that a lowering of wages would decrease the consumption of the laborer. Other representatives of New England emphasized the importance of labor. Stewart, who resided at Pittsburg—a growing iron center,—was equally emphatic and voiced a similar sentiment. “High-priced and prosperous labor requires protection against low-priced and depressed labor. Our laborer must work for six pence or yield the market to the paupers of England. The reduction of protection would reduce the price of labor in this country.”⁴ In the State Convention of National Republicans, held at Harrisburg, the effects of foreign competition upon the American laborer and mechanic were vigorously exploited. Reference was made to the reduction of wages to the scantiest pittance, to suspension of labor, and to beggary as following in the wake of a free-trade policy. Pennsylvania was now beginning to consider in earnest the effect of protection and of the reduction of duties upon the laboring classes of the state.

The struggle over the compromise tariff of 1833 added a little to the development and increasing importance of the new doctrine. Webster claimed that the reduction of the duties on shoes, boots, and clothing would bring thousands of mechanics engaged in these industries to ruin, and that the bill in these points aimed a deadly blow against the poor.⁵ Dallas of Pennsylvania protested against the unemployment which would be occasioned by the bill. The discussion of the tariff in the Senate, however, hardly touched the labor question, as other critical and overshadowing issues—the question of nullification and the constitutionality of a protective tariff,—were forced to the front in the tariff debates.

In the House of Representatives protection to labor received more attention. The bill proposed a general and gradual reduction of tariff duties and many local industries in the North

⁴ *Ibid.*, 3273-4.

⁵ *Ibid.*, 9: 728.

and East would be affected. The growth of manufactures and mining had absorbed a large amount of capital, and had increased the number of persons dependent upon these industries. Many complaints were therefore made against the tariff bill. Huntington and Ellsworth of Connecticut argued that the laboring class would suffer. Young declared that our laborers would be depressed to the state of English laborers. Briggs and Choate of Massachusetts claimed that thousands of men would be thrown out of employment and the former maintained that the price of labor would have to be reduced.⁶ Bates emphasized his hostility to the competition of American with foreign labor and maintained that lower duties would necessitate working cheaply, living cheaply, and stooping low. Burgess spoke of the competition with the paupers of Europe and the slaves of South Carolina, which free-trade would bring, and insisted that war was being made against the free white labor of the country.⁷ John Whipple of Providence, part owner of the Hope cotton mill, testified before a congressional committee that a reduction of duty would stop wages and force the laborers to migrate westward or maintain a scanty subsistence in New England. He added that the direct tendency of the tariff was to keep up the price of labor.⁸ The members from Pennsylvania were emphatic in their arguments. McKennan said that protection raised the wages of labor. Denny maintained that the poorer workmen, mechanics, and laborers would suffer, that their wages would be reduced, and that they ought to be protected.

Other protectionists argued along similar lines. The proposed reduction of the tariff had forced them to consider the effect upon the laborers engaged in the industry affected. Formerly they argued that protection would remedy unemployment. Now they claimed that free-trade would aggravate this condition. The argument is similar but the point of observation has changed. In previous controversies they contended that manufactures should be extended in order to insure employment to

⁶ *Cong. Debates*, 9: 1043, 1075.

⁷ *Ibid.*, 1384

⁸ *Ibid.*, 1509

the laboring classes. Manufacturing industry had grown, had absorbed considerable capital formerly engaged in navigation, and had employed thousands of persons. The attack upon the tariff was therefore partly an attack upon established manufactures, and protectionists now defended the interests of the class employed in this industry just as free-traders had formerly maintained the rights of seamen to their employment in commercial pursuits. The greater number of laborers and the increasing favor in which a higher standard of life was held, made it possible to protest against a possible reduction of wages and direct competition with foreign nations. Even then the argument is not entirely comprehensible without a consideration of the facts that the migration of labor to the West was not accomplished without considerable friction; that many laborers were loath to leave their native states and their old home surroundings; and that the eastern states desired to grow and prosper instead of declining to a position of relative inferiority as compared with the West.

The above facts indicate that the pauper labor argument had put in an appearance and had received some attention in 1832 and 1833. The subsequent subsidence of the tariff question prevented the healthy growth of the argument. Although attention had been directed primarily to other subjects, the relatively unimportant discussion of the tariff in 1837 again added to the gathering prestige of this line of reasoning. Davis typifies those giving expression to the doctrine in its advanced form. In the course of the debate he took occasion to utter the following sentiment: "The poor only ask of you that you would pursue toward them an American policy—a policy which will give them good wages for their labor—and they will take care of themselves. They entreat of you not to reduce them to the deplorable condition of the miserable population of foreign countries, by reducing their wages to the same standard. What makes the condition of the laborer so universally prosperous here? How is it that he enjoys the not only great physical but moral comforts and blessings to an extent surpassing that of the laborer in any other country whatever? It is because he is bet-

ter paid. Break down the business in which it is employed by subjecting it to direct competition with foreign pauperism; lessen the demand for labor by introducing foreign productions, and like causes will produce like results. You will then have as poor and wretched a population as that against which it will in such circumstances contend for bread.'"⁹

More conservative and less emphatic is the position of Buchanan who thought that it was both cruel and unjust to throw our workingmen out of employment for the benefit of foreign laborers. Webster, although conservative in his utterances, had also advanced to higher grounds. Our artisans, he said, were the first to be protected by the Constitution. The protection extended under our laws to capital was as nothing to that given to labor. He had now abandoned the idea of protection to capital and had substituted protection to labor. Others did the same. The pauper labor argument—that is, the claim that protection was necessary to maintain the wages of American laborers against the competition of the more poorly paid workingmen of foreign countries—was advanced as a chief cause for continuing the protective policy.

By common consent, the tariff of 1833 was to be left undisturbed until 1842. The agitation for higher duties, however, increased as the latter date approached. Horace Greeley became a strong advocate of protection and exerted a wide influence upon the thought of the hour. He was deeply interested in the welfare of the laboring classes and regarded protection as a measure of great value to them, emphasizing the high wage argument. In 1839,¹⁰ in answer to writers who denied that free-trade reduced wages, he set forth the claim that wages were higher in protection than in free-trade countries. The developing view-points of both the friends and enemies of the tariff were thus distinctly intimated.

As already indicated, the political soil of this period could hardly help but nourish the growth of the high wage argument. Not the tariff only, but other questions as well, felt the influ-

⁹ *Cong. Debates*, 13: 898.

¹⁰ *Hunt's Magazine*, 1: 417.

ences of the new impulses of the time. Although Harrison hardly touched the tariff question during the campaign of 1840, many northern protectionists realized that a new opportunity to agitate the question had presented itself. Greeley by means of the *Log Cabin*, a temporary campaign newspaper, urged the Whig arguments upon the country and frequently referred to the need of protection. He protested against the depression of the prices of labor, of property, and of produce, and against the stagnation of business. The discrediting of paper money, he said, was partly responsible for these conditions. Likewise the breaking down of the protective policy would expose American labor to an unequal rivalry with that of the oppressed vassals of Europe. Greeley emphasized the need of high wages, and the arguments on different questions were made to converge on this point. Daniel Webster again laid stress upon the importance of a high standard of life. He compared the American with the European laborer and claimed political and economic advantage for the former. He opposed a reduction of American wages and the administration measures which would affect the nominal wages of labor. These themselves had nothing or little to do with the tariff but paved the way for further discussion of the wage argument. Whig celebrations at different places, especially in Pennsylvania, utilized banners inscribed with "No reduction of wages" and "A protective tariff," thus popularizing the new development in the tariff controversy.

In 1842 when the tariff question again became acute, the pauper labor argument received greater attention than ever before. Many protectionists relied upon it as the main argument for a higher tariff. It, in fact, assumed the prominence which it has held ever since. Friends of protection had called a Convention of Home Industry to give impulse to the movement for a higher tariff. Committees were appointed to report on various articles of manufacture, and the subject of labor was also made the basis of one report. Greeley was chairman of this committee. No former convention of this kind had given special attention to the subject of labor. This one, among other things, adopted a resolution demanding protection for labor against

the degraded and starving conditions of the laboring classes throughout the world. Greeley's temporary publication, *The American Laborer*, running through a large part of this year, stoutly defended protection and especially asserted its importance to the interests of labor. He utilized the *New York Tribune* for a similar purpose.

The agitation throughout the country was vigorous. Home Leagues held meetings to discuss the tariff.¹¹ Laborers were invited to come and be convinced that the free admission of goods made by degraded foreigners would not be to their advantage. Facts were presented to show that the hard times affected those industries most which employed the least machinery, and that journeymen, apprentices, and laboring men were most injured. Again it was urged that some foreign countries paid bounties on exported goods and free competition would lower American wages accordingly. Selfish interests likewise took advantage of their opportunities. The iron and paper manufacturers met and discussed the problem of protection.¹² They did not want our labor to work at reduced prices. The boot and shoe dealers at Boston took a similar point of view. Whigs everywhere addressed their appeals to the laborer and defended a high wage. Protectionists¹³ in New York wanted a tariff which would protect us from articles competing with the products of American labor, and resolutions to that effect were introduced into the Senate of that state. In New England the argument was extensively used and furnished political capital for friends of the tariff. Even in the West, the need of high wages for the laborer was emphasized. In the North the movement was not confined to the Whigs and many Democrats supported protection to labor.

In the congressional debates on the tariff of 1842 protection to labor was one of the favorite arguments of the high tariff men. Representatives from New England, New York, New Jersey, Pennsylvania, and also from the West demanded protec-

¹¹ *New York Tribune*, January 5, 1842.

¹² *Ibid.*

¹³ *Ibid.*, March 26, 1842.

tion on this ground. It was contended that that nation stood highest in moral and physical greatness which gave the highest rate of wages and the largest returns for labor, and that protection to labor meant secure, productive, and steady occupation, free from foreign aggression.

Naturally the strongest appeals on this ground came from the East. Fifty-three of the seventy-two congressional districts in this section, conducting manufacturing and mercantile enterprise, were Whig. The South had fifteen such districts represented by seven Whigs and eight Democrats. The fifty-one farming districts of the East sent but twenty-four Whigs, while the farmers of the West sent an almost solid Whig delegation. (33 to 9). The home market still appealed to the West, but in the East protectionism had its strength largely in the manufacturing districts. Here was the large laboring population. The favorable influences described above, the change in the industrial situation, the temporary depression, and the conditions existing abroad—all cooperated to emphasize the importance of the high wage argument, and to force apparent concessions to the laboring classes.

The Committee on Manufactures in 1842 reported a tariff bill and called attention to the problems involved. This was the first time that such a committee considered the various industries with the view of ascertaining the attendant interests of labor. Special stress was laid upon industries in which labor was the chief element of the product. The importance of the iron and leather manufactures to the laboring classes was pointed out, and the pauper labor of Europe was held responsible, in part, for our industrial depression, while the relatively high American wages were cited as a cause for protection against foreign labor which would otherwise degrade our own.¹⁴ The debate then opened on the floor of Congress where the Democrats had posed as the exclusive friends of the poor and the laboring classes. To these Hudson of Massachusetts made a vigorous reply.¹⁵ He strongly opposed the debasement of American

¹⁴ 27th Cong., 2nd Sess.; *Com. Rep.*, No. 461.

¹⁵ *Cong. Globe*, 13: App., 929.

labor, gave statistical evidence indicating the pauper wages of European labor, and urged the need of a tariff which would guarantee fair competition between our own and foreign workmen. He furthermore maintained that the tariff would raise wages. Other protectionists argued along similar lines. The identity of the interests of the farmers, mechanics, and laborers was proclaimed, while the home market and labor arguments were brought into definite relation and connection with each other. Senator Evans defended the protection principle, contending that a high price for labor was a test of prosperity. The opposition, he argued, favored low prices and low wages, but if a reduction of prices were occasioned, wages would be the first to fall. Choate held that the labor in all our industries ought to be protected, and Huntington of Connecticut declared that protection to labor was necessary for flourishing agriculture and manufacturing. Furthermore the consumer would be benefited. Hardly an advocate of protection failed to refer to the need of protection to labor. The argument itself as presented took three different lines of development; first, the high wages or pauper labor argument which was the most important; second, the claim that a readjustment of the level of prices would be distinctly injurious to the laboring classes; third, protection would increase the demand for labor, hence benefit the laborer by multiplying employment and insuring him a reasonable remuneration. This was the gist of Webster's labor argument in 1840. Greeley in 1843 emphasized this phase, but also referred to the subject of pauper labor.¹⁸

The law of 1842 was not distinctly a partisan measure, although Whigs and Democrats rallied on opposite sides. In the House 35 Whigs voted against, and 20 Democrats for, the bill. Nineteen of the latter came from New York and Pennsylvania, and nearly all of these represented districts containing a large manufacturing population. The reasons for this vote were later stated as follows, "The argument upon which the tariff of 1842 was sustained was that our manufactures, agriculture, our every

¹⁸ Greeley, *Recollections of a Busy Life*, 549.

interest required to be protected against the pauper labor of Europe.”¹⁷ Certainly this argument had become an important one in the ammunition of the high tariff party.

The revival of the tariff question necessarily filled the country with discussion on the subject. The high wages argument had become the subject of defense and dissection. The Central Committee of Home Leagues in an address set forth the claim that the high standard of the American laborer must be maintained and injurious competition be prevented. Protection newspapers continued to agitate the question, and the direct influence of the new tariff impressed itself upon the public mind. Entirely apart from the merits of protection as a permanent policy, it is undeniable that the tariff of 1842 accelerated the renewal of prosperity.¹⁸ Iron, cotton, and woolen mills revived and many wage earners again found employment. A period of general business activity followed.

The different influences before mentioned continued to make possible the growth of the high wage argument and some of our manufacturers employed their efforts to enhance its apparent importance. In 1844 therefore, the Whig party, assembled in convention, dared to express itself in favor of a “tariff for revenue to defray the necessary expenses of the Government and discriminating with special reference to the protection of the domestic labor of the country.”¹⁹ Other arguments were subordinated, and the new one was hereafter to be of paramount importance. The discussion of the tariff in and out of Congress that year added nothing to the growth of protection theory, hence it is necessary to turn to 1846 when the subject again received consideration in detail.

The Democratic party being again in power sought to revise the tariff. The southern wing was in control and the former Democratic protectionists of the North were forced to become lukewarm toward this doctrine. A comparatively easy victory

¹⁷ *Cong. Globe*, 13: App., 495. Speech of Wright, of New York.

¹⁸ See discussion of effect of this act in Taussig, *Tariff History of the U. S.*, 119-21. Also Bishop, *History of Manufactures*, 2: 448.

¹⁹ *New York Tribune*, May 11, 1844.

by the opponents of the Act of 1842 was the result. The supporters of protection, however, stoutly defended their principle, placed added emphasis upon protection to American labor, and gave to that doctrine a completeness which required but little subsequent refinement. Severance of Maine,²⁰ alluded to the volume of our laboring population, to their consuming power, to the need of creating a demand for labor, to the migration westward which would result from free trade, and to the opposition to the abolition of slavery because it would enhance the price of labor, also to the fact that hard times caused disproportionate suffering among the poorer people. Davis of Massachusetts,²¹ in advancing the pauper labor argument, contended that not only economic loss but a diminution of moral and mental culture was the necessary consequence of a low tariff policy. Stewart emphasized the same consideration as did the last named speaker, but also called attention to the political insignificance to which the poorly paid laborer will decline. Winthrop, however, struck even more closely the characteristic point of the high wage argument in the following words: "Protection looks at the workingman not in his mere brute capacity, as a consumer, but in his higher nature as a producer. It looks not to reducing the price of what he eats or what he wears, but to keeping up the price of his own labor. It looks, in short, to wages first, wages last, wages altogether."²²

Thus we have in the arguments of these men the complete emergence of the doctrine that protection preserves the high wages of the American workmen against the competition of the pauper labor of Europe. It took the form of protection against the product of labor, not against the labor itself. Either method was said to amount to the same result, but immigration was not then considered an important problem and restriction was said to be contrary to our traditional policy. Strong friends of labor as well as capitalists maintained this principle. It is true that

²⁰ *Cong. Globe*, 16: App, 705.

²¹ *Ibid.*, 1114.

²² *Ibid.*, 973.

in subsequent discussion²³ the proper amount of protection was computed to be the difference between the labor cost of producing a good here and the similar cost abroad, but the essential characteristics of the argument had now been imparted to it. The manner in which it was met by the opposition, in turn, assists in explaining the cause of its rise and throws light upon various movements of the time. We shall, therefore, briefly point out the attitude of the free-trade party.

In a previous chapter we have shown that the ablest free-traders, such as Gallatin, had pointed out the relation between labor and wages when that subject was first discussed, and had suggested the chief cause of high wages; viz., the abundance of cheap lands, the productivity of labor, and the insufficient supply of laborers. In the earlier decades when the general attitude toward wages was a negative one, the burden of the problem rested heavily upon the protectionists. Free-traders merely pointed to the difference between wages here and abroad, and discussed the theoretical considerations which determined the difference. With the growth of ameliorative tendencies and the assumption of a positive program in respect to wages by protectionists, free-traders were forced to analyze the bearing of their theories upon the actual conditions of the time. They faced a concrete situation in a progressive nation where added economic advantage did not cover the entire gamut of the workingman's interests. The new problem for the opponents of the tariff was the relation of free-trade to the general elevation of an ambitious and independent laboring class. Unfortunately the abstract economist who thinks internationally often supplies with arguments unchanged the politician and legislator who think nationally or more often sectionally, and these arguments the latter attempt to apply to conditions illy fitted to become the subject of extensive theorizing. The sectional aspect of the tariff con-

²³ The following is a specimen of the argument which became current: "When foreign labor which costs one—or its products which are the same thing—comes into the same market on a free-trade platform with American labor which costs three—or with its products which are the same thing—it is absurd to suppose that American labor will still maintain the relative value of three to one. They must both come to the same level." Colton, *Public Economy*, 65.

fused the defense of the free-traders and hindered the development of the refutation of the high wages argument.

The existence of slavery in the South and the championship of that system influenced southern free-traders in their attitude toward labor. Low wages in the South were viewed with comparative complacency. The dignity and worth of labor was yet but dimly realized there. Accordingly a defense of high wages was difficult, and the artificial stimulation of the price of labor was severely criticised. Even in 1842 the minority of the committee on manufactures declared that if manufacturers would not reduce wages they should be forced to decrease their profits, that the consumer would not pay the cost of a high wage when a low wage only was demanded in the South for a similar service.²⁴ Free-traders, however, began to develop several lines of attack. Calhoun²⁵ in 1840 vigorously assailed the protectionists' position, contending that high wages were due to the effectiveness of industry, and that only those high wages caused in this way were an evidence of prosperity. Two years later he declared that wages were but the residuum after deducting the profit of capital and the expense of production including the exaction of the Government in the shape of taxes; that as the latter decreased, wages would increase, and that prices might fall and wages rise at the same time—a combination most favorable to the laborer. Here Calhoun recognized the laborer both as a producer and a consumer; both lines of argument were used by the opponents of the tariff.

That a protective tariff, under the conditions which obtained during the period of tariff controversy, would maintain the wages of many American workingmen could hardly be doubted. Even so ardent a statesman as McDuffie admitted that it raised the wages of manufacturing labor. It was necessary, therefore, to analyze the laboring population and to point out how few were directly dependent upon the tariff. Protectionists had insisted that the entire laboring population was benefited thereby.

²⁴ *27th Cong., 2nd Sess., Rep., No. 461.*

²⁵ Speech in the U. S. Senate, February 5, 1840.

Smith of Virginia,²⁶ replying to this argument in 1842, computed that only 265,000 laborers were employed in factories directly, that nearly that number of mechanics were dependent upon agriculture, and that less than one-third of the laborers would be affected by the tariff directly. Another speaker²⁷ contended that out of the 791,000 workmen in manufacturing and mechanical pursuits, according to the census of 1840, an analysis showed that only 284,351 were engaged in protected industries. Various estimates were made tending to show that only a small per cent. of the American people could be benefited and this at the expense of the remainder. We were exporting goods and competing abroad with foreign labor—a fact which free-traders employed to show the possibility of a like competition if the goods were brought to our shores. Our improvement in efficiency, it was argued, was sufficient to cover the difference in the cost of labor, but even if the contrary were true, protection was not yet justified.²⁸ Furthermore the difference between wages here and in England was slight—a statement quite true of the wages of certain skilled laborers, but one not generally reliable. The additional contention that the contest was not between high and low wages but between human labor and machinery received some consideration, in view of the fact that the increased use of the latter had caused temporary displacements of labor. On the whole, the efficiency of American labor was properly emphasized, but this fact, coupled with the frequent admission that labor in the North was benefited by protection, rendered the defense inadequate. The argument in reference to the laborer as a producer and to his nominal wage under the two systems needed the support of the claims concerning the effect of protection upon the real wages of the laborer, upon his double capacity as a producer and a consumer.

Gallatin, when the wage argument first made its appearance, vigorously emphasized the importance of the real wages of the laborer. While the earlier tariff discussions concerned them-

²⁶ *Cong. Globe*, 13: App., 726.

²⁷ Burke, Hon. Edmund, *The Protective System*. Washington, 1846.

²⁸ *Cong. Globe*, 13: App., 114, 484.

selves with the consumer, the laboring classes, owing to their unimportance, failed to receive much attention as such. The hardships incurred owing to duties on the necessities of life were urged against the protective policy. The opposition to the duties on coal, salt, etc., after the Compromise of 1833 had the consumer's interests in mind. During the controversy between 1840 and 1846, however, the laborer as a consumer received ample consideration. In this connection the free-trader more emphatically assumed the offensive, pointing out that a tariff on goods would lessen the real wages of labor, and the laborer would receive no share of the benefits of the tariff. In many cases, indeed, the competition between laborers prevented them from securing an advance in nominal wages. The diminution in the wages of many cotton mill employees after 1842, and the reply of various manufacturers that they were suffering from domestic, not foreign, competition, served to accentuate the insistence of the free-traders upon the importance of the real wage. Boot and shoe makers of New York City held a meeting in 1845 and opposed the tariff of 1842, claiming that it increased the price of stock which they manufactured and also of nearly all the articles which they consumed, and that it was a cause of the depression in their business. Secretary Walker,²⁹ in his report of 1845, declared that wages had not advanced after the tariff of 1842, but his statement is necessarily erroneous in view of the subsequent revival of business. He more truthfully asserted, however, that the tariff fell more heavily upon the poor. Many laboring men opposed protection for the same reason, claiming that their wages were not affected, but that their cost of living was. The reaction against the tariff of 1842, culminating in the Act of 1846, was to a considerable extent brought about by a spread of opinions of this nature.

A defect of increasing importance in the wage argument was its attitude toward the immigrant. As before indicated, Seth Luther had in the early thirties pointed out the inconsistency of protectionists in admitting workmen freely from abroad, but

²⁹ Taussig, *State Papers on the Tariff*, 226.

objecting to the free importation of goods. So in 1842 it was maintained that if protection was necessary, the cheap labor planting itself among us needed to be feared. A few years later, Wilmot of Pennsylvania, in examining the motives of the manufacturers, quite correctly charged them with expressing no alarm over the immigration of cheap labor, and he furthermore claimed that they were actually attempting to depress the price of labor. Nor were protectionists dismayed over the importation of labor-saving machinery. John Pickering³⁰ in 1847 stated the case in the following vigorous words: "Therefore if the working classes will promote the 'protective system,' their first object should be to prevent the importation of foreign 'pauper operatives;' it will then be time enough to think about preventing the importation of the goods they make; till then it would be perfectly useless." In this manner one of the great weaknesses of the wage argument was continually punctured and exposed to public ridicule. Many workingmen in the East were beginning to feel the competition of the immigrant and they opposed a system which seemed to provide a sham defense only.

The position of the western lands in maintaining and advancing the current rate of wages has already been explained. Many southern men who believed that their section was taxed for the benefit of northern capital and perhaps of northern labor also, became more earnest in their support of the favorite western proposition to reduce the price of the public lands. Secretary Walker³¹ in his well-known report voiced the sentiments of the

³⁰ *The Working Man's Political Economy*, 150.

³¹ "But while the tariff does not enhance the wages of labor, the sales of the public lands at low prices.....would accomplish this object.....The power of the manufacturing capitalist in reducing the wages of labor would be greatly diminished. Reduce the price which the laborer must pay for the public domain:.....prevent all speculation and monopoly in the public lands; confine the sales to settlers and cultivators in limited quantities;.....reduce the taxes by reducing the tariff and bringing down the prices which the poor are thus compelled to pay for all the necessaries of life, and more will be done for the benefit of American labor than if millions were added to the profits of manufacturing capital by the enactment of a protective tariff." On the other hand, Walker's position in respect to the relation of labor and capital was expressed as follows: "When the number of manufactures is not great the power of the system to regulate the wages of labor is inconsiderable; but as the profit of capital, invested in manufactures, is augmented by the protective tariff, there is a corresponding in-

free-traders who believed this measure to be a more effectual means of preserving the high wages of labor and that without great cost to the remainder of our people. By reducing the price of lands to nominal figures and confining the sale to actual settlers, laborers could hardly be deprived of the alternative of becoming independent if good wages were not paid by manufacturers. Protection had been the stimulus the East demanded to accelerate her growth and retain her working population. Free land was Walker's remedy for diminishing wages but it implied the migration of the laborer to the West.

crease of power until the control of such capital over the wages of labor becomes irresistible. As this power is exercised from time to time, we find it resisted by combinations among the working classes.....But the government, by protective duties, arrays itself on the side of the manufacturing system, and by thus augmenting its wealth and power soon terminates in its favor the struggle between man and money—between capital and labor."

CHAPTER VII

CONCLUSION

In the foregoing pages we have attempted to review briefly the causes and development of the labor argument for protection. We have seen that the extraordinary conditions ending with peace with England in 1815, and especially the few years of war with that country had given manufacturing enterprise a decided impetus. A large amount of capital had been invested in various industries, and many women and children had been employed. A considerable amount of labor primarily engaged in other industries had also assisted the growth of manufactures. The demand in 1816 for protection was accordingly supported by several arguments. It was claimed that industries established during the war should not be allowed to perish; that a parallel development of all our industries was necessary; that a home market was needed; that we should become independent of foreign nations; furthermore that labor formerly of no value was now made useful and that this labor should be continued in employment. Hamilton had stated the labor argument long before. Now when the time was ripe it was reiterated and given a new emphasis. The argument itself was not that of a "restrictionist." Protectionists usually disclaimed any intention of foisting such a system upon the country. On the other hand an ambitious and youthful nation would be likely to look with favor upon a policy which would employ all its available labor. Thus the form of the labor argument used in 1816 in connection with the appeal to support the cotton industry came into vogue and continued to be urged as long as the industrial and labor conditions and the ideals of the times allowed.

It cannot be over-emphasized that the more fruitful discussion of the tariff has been in relation to its practical operation and that theoretical considerations have had less weight. The latter are the arguments used by the body opposing the policy. Nor has the economic motive been the only actuating one. Furthermore the freely expressed attitude toward the laborer naturally gave to both protectionists and free-traders their characteristic arguments. The former pointed to the better paid workmen abroad and claimed our laborers were securing but little more, hence a protective policy would be justified. The latter emphasized the differences and concluded that such a policy would be injurious. This was largely done, not after consultation with the laboring man, but quite apart from his wishes. The lack of interest in the elevation of the working classes was only too evident. The years 1819-20, however, inaugurated a change and the mechanic appears as a factor in tariff controversy and usually as an adherent of the protective principle. The subject of unemployment had suddenly become an important one. The need of work for the laborer was boldly exploited, and the argument when used at critical times has usually been effective. The earlier point of view was concerned with security of employment, and not with a desire to raise wages. High wages were in fact considered as one of the disadvantages with which American manufactures were forced to cope. Still the importance of steady employment, quite apart from the rate of wages, was realized; the opposing parties differing of course as to the method of securing this desideratum.

The rise of the laboring classes, numerically, politically, economically; the advent of better ideals; the enlarging contact with foreign labor, owing to increased immigration; and the sectional aspect which the tariff began to assume, forced attention to the subject of wages. Not only the master mechanic but the journeyman and the ordinary laborer in the factories and on the farms, became important. The girls in the cotton mills were indeed among the first to demand higher standards. A transformation of the labor argument became necessary. The diver-

gence, however, from the older position is not an abrupt one but clearly expresses the dawning of a new era. Webster is a link joining the old to the new. Security of employment with less emphasis upon its effect upon wages was the burden of his argument. Preservation of the American wage against the competition of poorly paid foreign labor was demanded by Stewart, John Davis, and later by Kelley and others. Foreign labor conditions now served a different purpose. The improvement in America had proceeded more rapidly than abroad, consequently protectionists found it advantageous to indicate the great difference between wages here and abroad, instead of minimizing them as formerly. The change was less a new attitude toward the facts than a change in the attitude toward labor. The high wage argument must be explained largely in connection with this important fact. This is the more apparent when one realizes its similarity to that of the wages argument made against the Independent Treasury bill about the same time. Nor did the free-traders immediately abandon their former position. Their policy was a cautious one. In common with their opponents many of them still cited the low wages of English workmen, but often with a different purpose than formerly. Then it was to indicate the absurdity of protection; now to show the injurious and pernicious economic effect of protection upon the workingmen, the moral and political effects having from the beginning received considerable emphasis. It is but slowly that advocates of free-trade crystallize their opposition to the high wage argument by emphasizing the chief causes of high wages and calling attention to the consumers' interests. The liberation of the American mind from sectional bias would have simplified the labor argument, but this could not be realized.

Sectionalism as a factor in evolving the wage argument can not be overlooked. Both South and West were agricultural. The latter was formerly a unit for protection, but by 1842 many of its leaders had joined the South against the protective policy, which restricted migration to the new lands and in part sustained the efforts of the East to retain its growth. The high

wages argument for protection was largely an eastern argument. True, the contrast between free and slave labor accomplished another line of territorial cleavage, but the leading spirits of the argument were eastern men. Clay and western men in Congress did, indeed, advocate protection to American labor, but usually in connection with its reputed advantage to the agricultural interests. The occasional western presentation of the high wages argument, however, neglected this and simply bore evidence of the importance of eastern influence or of the psychology of partisan politics. The various movements which culminated in the demand for higher wages were not all distinctively eastern, yet the laboring classes were largely confined to that section, so the cry for protection against foreign labor would naturally be more urgent there than elsewhere. The somewhat tardy recognition by the South of the need of higher wages added to the importance attached to the argument. The South could hardly be expected to have agreed with the East on this point. The interests of the two sections differed, and the possibility of paying high wages was necessary to insure the future progress of the East. The relation of each section to the tariff and to the high wages argument becomes clearer when the conditions of progress are thus indicated.

The theory of wages held by American controversialists necessarily affected the growth of the argument. Although the immediate and practical bearings of protection were the most important points at issue, the theoretical background can not be omitted. The local influence of the unsettled western lands in buoying up the standard rate of wages was generally admitted. The connection between wages and the productivity of labor was less clearly understood and this misapprehension was the cause of much fallacy in argument. Francis A. Walker,¹ however, in asserting that the "speeches of Clay, Stewart, and Kelley have significance only on the assumption that one day's work here is worth one day's work elsewhere" neglected entirely the sectional aspect of the controversy—certainly a very prom-

¹ *Wages*, 41.

inent feature. Yet his point is a strong one, for the importance of productivity was inadequately treated, especially by protectionists. Henry Carey² did point out that productivity influenced the wages of the laborer. Gallatin,² on the other hand, spoke of skill and productivity, but urged the all-inclusiveness of the indefinite demand-and-supply of labor. Calhoun² in his contention that wages depended upon the effectiveness of labor spoke more to the point, and the development of this idea placed the free-trade contention on firmer ground. With the growth of free-trade sentiment in the North and West, this factor received new development; real wages were emphasized; and free-traders began to explain away the difference between American and English wages on natural grounds, and to belittle the reputed high wages of domestic labor. Formerly they had pointed to the great gap which existed between the two. On the other hand, an indetermination to work out the effects of competition in the long run, and stress upon the immediate result upon the class of labor affected, marked the attitude of the protectionist.

The protective system has been an historic product, its growth and decline depending upon political and economic circumstances. As is well known, protection was at first regarded as a temporary policy, and only subsequently did its advocates demand its indefinite continuation. Certain arguments, likewise, partly valid when first promulgated, are no longer applicable, but the force of inertia has carried them on and they are still used with effect. The high wage argument was not only an historic outgrowth but represents in part an ingenious opportunism. A logical development of the argument would require protection against the immigration of the so-called pauper labor itself. Curiously enough the application of the doctrine has been a one-sided one. The exclusion of the Chinese and of alien contract labor marks the limit of its progress along these lines. American labor has never stood unitedly for this doctrine, although that of certain industries has been quite unanimous in its favor. At the time of its inception many laborers denied

² See references cited.

the validity of the argument. Others directly affected by foreign competition asked for protection. Many were not concerned with the question. It is hardly possible to determine the direct influence exerted by labor itself upon the growth of the high wage argument. It was the indirect influence effected by the upward pressure of the class, which more largely represents the contribution of labor to this new line of development. The labor vote, however, has been an important item. The Whig platform of 1844 betrays this fact as do other platforms of later date. The capture of Pennsylvania by the Republicans is said to have been consummated by a similar line of action. Other states have been held to protection in the same way, but certain classes of labor only have been instrumental agents in its behalf.

The argument has received but little academic support, the majority of economists having denied its validity, but it is generally recognized that in a progressive society a protective tariff may temporarily maintain the nominal wages of a particular class of workmen; that is, if the industry affected depends upon the tariff for its existence. Here, however, the tariff is considered neither nationally nor yet sectionally, but only in relation to a single industry—an inadequate basis for the continuation of a tariff system. Besides this, the advantage claimed is for nominal, rather than for real, wages.

When the wage argument was first urged a large percentage of the laboring class was found in more or less protected industries. Even the opponents of the tariff of 1842 generally admitted that practically one-third of the 791,000 laborers would be benefited by protection although at the expense of the rest of the American people, and especially of the agricultural portion. At present the number of laborers affected directly by the tariff is exceedingly small. Bullock has estimated it at from 5 per cent. to 10 per cent. of the total laboring population.³ Edward Atkinson computed the number directly concerned as approximately 600,000—about 2 per cent. of the entire number

³ *Introduction to the Study of Economics*, 373 (Revised Ed.).

engaged in gainful occupations.⁴ The slightness of the apparent advantage to labor at once become manifest. Even though artificial wages at the expense of the consumer were justifiable, one can hardly conclude otherwise than that the once comparatively useful doctrine that protection maintains American wages is little more than an anachronism. Like many other institutions that have outlived their usefulness it has an unusual tenacity of life, and has projected itself from the past into the present, because it has not met adequate resistance. Protection as an offset to the influence of the free lands of the West is explicable, but free lands no longer regulate wages. Yet the sectional aspect of the tariff has been nationalized. Alternative employment for the laborer is, however, quite unavailable. Besides, increased immigration diminishes whatever prospects may open along such lines. The rapid occupancy of the West after the Civil War transformed thousands of possible laborers into farmers, and the development of transportation accelerated this movement. The hardships incurred in the semi-arid districts during the decade 1880-1890 and their subsequent depopulation indicated that the limit of cultivable free lands had been reached, at least until new methods of agriculture were employed. The strength of the impulse to settle upon the accessible lands that remained is seen in the frantic rush to Oklahoma, Indian Territory, and other reservations at their opening. The wages and the condition of the western farmer were preferred to conditions elsewhere. It is evident that protection to labor as a sectional policy had an animus not contained in the present day concept of protection to American labor. Conditions have changed fundamentally since the advent of this doctrine. The historic conditions surrounding its growth render its development comprehensible. The sectional interests involved gave it a natural impetus, while self-seeking manufacturers also encouraged the doctrine. Other causes for its growth have already been mentioned.

No student of tariff history can afford to forget that our

⁴ *Facts and Figures*, 42.

tariff policy has been an historical development, that it must be interpreted in connection with the contemporaneous facts of history, and that the high wages doctrine deserves the same liberal treatment. In the preceding pages, accordingly, we have endeavored to trace the growth of the labor argument for protection and to show how it culminated in the so-called "pauper labor" or high wages, argument; which, however, under conditions totally different from those obtaining at the time of its inception, can be regarded in no other light than as a "survival."

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THE RISE AND DECLINE OF THE WHEAT GROWING
INDUSTRY IN WISCONSIN

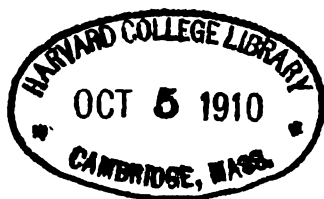
BY

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PREFACE

It was the original intention to add another chapter, relating to the system of marketing wheat within the state, to this study. Lack of space, however, together with the fact that it is difficult to separate a consideration of the method of handling wheat from a consideration of the methods employed in the moving of other grains seemed to advise withholding this portion for separate publication.

The author desires to express his appreciation for many helpful suggestions from various sources, and for courteous answers to inquiries by letter. His thanks are due in an especial degree to Professor Henry C. Taylor of the Department of Political Economy at the University of Wisconsin, and to Professor Frederick J. Turner, of the Department of American History, at the same institution, for reading the manuscript and for scholarly and pertinent criticism of the same. The unfailing courtesy and efficient services of the members of the staff both of the library of the University of Wisconsin and of the library of the Wisconsin State Historical Society merit the warmest acknowledgment. Lastly, acknowledgment is due to the Carnegie Institution for assistance in the preparation of this study.

With the hope of stimulating the reader to undertake the entire study for himself rather than with the object of attaining even approximate completeness, a concluding and summarizing chapter has been added, indicating in a general way the trend of the whole and pointing out some of the main conclusions. The detailed character of much of the descriptive material relating to the strictly agricultural portion of the study and the repetition of general principles and conclusions already occurring therein, seemed to recommend less emphasis upon this part in the concluding chapter, with the result perhaps that undue prominence has there been given to certain other features—certainly of prime, but not of paramount, importance.

June 18, 1908.

JOHN G. THOMPSON.

PART I

EARLY CONDITIONS

THE RISE AND DECLINE OF THE WHEAT GROWING INDUSTRY IN WISCONSIN

CHAPTER I

INTRODUCTION

In the rapidity of the rise and decline of the wheat industry, and in the extent of that decline, Wisconsin is unique among the states of the United States that have been important in wheat culture. Illinois comes more nearly approximating Wisconsin in this respect than any other state. Illinois, however, maintained, from 1859 to 1879 inclusive, first place in the number of bushels produced, dropping to third place in 1889 and to fourteenth place in 1899. Wisconsin reached third place in 1859, was exceeded by Illinois alone in 1860, and dropped to fifth place, ninth place, twelfth place and twenty-second place in 1869, 1879, 1889 and 1899 respectively. Illinois has, moreover, always exceeded Wisconsin in the production of wheat per square mile, producing over twice as much per square mile in 1899 as the latter state. Both states stood about on a par in 1899 in respect to per capita production, the figures being 4.35 bushels per capita for Wisconsin and 4.11 bushels per capita for Illinois. The very large population of Chicago, however, is a disturbing element and unduly depresses the per capita production of Illinois. From 1849 to 1879 Wisconsin produced a greater number of bushels per capita than Illinois,—exceeding the latter state about 50 per cent. in 1859 and more than 100 per cent. in 1869. Production per capita is in general the index of the degree of specialization and denotes the ability of a producing

area to export a surplus. Considering the fact that Wisconsin is primarily an agricultural state, as compared with Illinois, the decline per capita in Wisconsin is much more marked than in Illinois.¹

In spite of the fact that Ohio was constantly held up before the wheat growers of Wisconsin as an awful example of overspecialization in the cultivation of that crop, conditions have in reality been relatively stable in the former state. In number of bushels produced, Ohio stood second in 1849, fourth in 1859, third in 1869 and 1879, fifth in 1889, and rose to third place again in 1899. In production of wheat per square mile, Ohio stood second from 1849 to 1889 inclusive with the exception of 1859, dropping to fifth place in that year. In 1899 Ohio held first place in this respect. On the other hand Ohio has never stood higher than ninth place in per capita production of wheat, which rank was attained in 1849. She held fourteenth place in this respect in 1859, 1879 and 1889, eleventh place in 1869 and thirteenth place in 1899.²

The present study is an attempt to describe the development of the wheat industry in Wisconsin, and to arrive at a conclusion as to the cause or causes of its meteoric rise and decline.

¹ Of total persons engaged in gainful occupations, according to the *Twelfth Census*, (2, cxxxv) 36.8 per cent. were engaged in agricultural pursuits in Wisconsin, and only 25.7 per cent. were so engaged in Illinois.

² *Relations of Population and Food Products in the United States in Bulletin of U. S. Dep. of Agric., Division of Statistics*, No. 24. Washington, 1903. pp. 27-32.

CHAPTER II

CONDITIONS IN THE WHEAT INDUSTRY IN WISCONSIN BEFORE THE ADVENT OF THE RAILROAD.¹

From the *Seventh Census of the United States* we have comparatively reliable statistics as to the wheat industry in Wisconsin just preceding the advent of the railroad. We have, further, overwhelming testimony as to conditions in respect to wheat culture in Wisconsin at that time. In the *Transactions of the Wisconsin State Agricultural Society* for the year 1851² we have a report on *Agricultural Condition and Capacity* that covers nearly all of the more important wheat producing counties of that state. This report is supplemented by numerous references in the columns of the *Wisconsin and Iowa Farmer and Northwestern Cultivator*, in the *Prairie Farmer*, and in the various local newspapers, local histories, pamphlets, etc.

According to the census of 1840, 212,116 bushels of wheat were produced in Wisconsin in 1839,* with an acreage of 15,151† acres. The crop of 1849 according to the *Seventh Census* amounted to 4,286,131 bushels, and the acreage had increased to 306,152 acres.³ Practically the whole amount in 1849 was produced south of Green Bay and east of the Wisconsin River. Rock and Walworth counties together produced 33 1-3 per cent. of the total. The four counties of Rock, Walworth, Dane and Dodge produced approximately 50 per cent. of the whole crop.

¹ For characterization of the industry of Wisconsin in 1840-1844, see *Debow's Rev.*, 6: 303.

² P. 122 ff.

³ According to the report of the Secretary of State of Wisconsin there were 306,152 acres sown to wheat in 1849. This amounts to about 80 per cent. of the whole area of improved land in Wisconsin at that time, according to the U. S. Census. These figures are much more significant when we recall that improved land includes "cleared land used for grazing, grass or tillage, or which is now fallow." *Seventh Census of U. S.*, XXII ff.

* See appendix, Table VI, foot-note reference.†

† See appendix, Table IV, foot-note reference.‡

Grouped according to regions we would have first, and by far the most important, the region in the southeastern part of the state, which found a market either at home in the local mills or in supplying the stream of newly arrived immigrants or else at the eastern lake ports of Milwaukee, Racine, Southport (Kenosha) and Port Washington; second, the Green Bay region, which found a market either at home or a little to the north, supplying the demands of the lumbering business, of the fisheries, and of the mines on the shore of Lake Superior, a small surplus being marketed east by the lake; third, the southwestern region, with a market either in the lead mining districts, or up the river at the military posts, Indian reservations and fur-trading stations, or else down the river at St. Louis; and last, the two small areas of production around Chippewa Falls and Hudson. How largely the surplus wheat moved to the lake ports is shown by the fact that Milwaukee, Racine and Southport (Kenosha) exported 2,678,045 bushels of wheat and 183,557 barrels of flour, equivalent to a total of 3,504,000 bushels of wheat, during the year 1849.⁴ Transportation to the lake ports was exclusively by team and wagon. There were at this time a few plank roads from the more eastern counties to the lake, but these were only a little less unsatisfactory than the other roads, and the latter were likely to be impassable in the spring season. Reports of the Milwaukee market make frequent reference to this fact. It was said that it cost "18 pence" to send a bushel of wheat from Janesville to Milwaukee by plank road, whereas it was expected to cost less than 5 cents per bushel to send it to Chicago by rail.⁵

The farmers of Marquette county were compelled to haul their grain to either Milwaukee or Sheboygan, 80 or 100 miles. It took a week to make the trip to Milwaukee and back. With

⁴ *Prairie Farmer*, 10: 70.

⁵ *Milwaukee Sentinel*, Jan. 30, 1849. How far this expectation came from being realized is proved by a complaint in the *Report on the Improvement of the Rock River* (1867) that the usual charge on a bushel of wheat from Janesville to New York was 63 cents and to Chicago or Milwaukee by railroad, 18 cents. See below p. 35, note 82 (b), where the shilling is used as equivalent to twelve and one-half cents. The "pence" would thus be valued at a little more than one cent.

desired improvements on the Fox and Wisconsin rivers, a market was anticipated either at New York or New Orleans.⁹ Previous to 1851 the best market for the surplus wheat of Columbia County had been Milwaukee, but on account of the low price at that time the wheat would not bear transportation to that point and was disposed of at better advantage at the "Pinery."¹⁰ In 1851 there were eight flouring mills in Dane County.⁸ The surplus wheat went east to the lake ports, or south to Janesville which was the "center of a great milling interest."¹⁰ Watertown was also the center of a considerable flour industry. It was estimated by the *Watertown Chronicle* that 125,500 bushels of wheat had been purchased and 26,000 barrels of flour manufactured in that town in the year preceding August, 1850.¹⁰ Manitowoc county farmers did not produce sufficient wheat to supply home demands and hence received Milwaukee and Chicago prices with freight, pierage, dockage, drayage and commission added.¹¹ Walworth county surplus wheat was hauled to Milwaukee, Racine and Kenosha, 30 to 40 miles distant. The trip out occupied from one to one and a half days. The teams brought pine lumber and merchandise of various kinds in return.¹²

There has always been a strong sentiment in Wisconsin in favor of a home market. This has often been reflected in a favorable attitude toward a protective tariff and the development of home manufactures within the state. It found expression again, in a favorable attitude toward immigration into the state—that producers and consumers might be brought closer together. Again, and especially in periods of stringency, it took the form of hostility toward the bringing in of eastern merchandise.¹³ Complaint was made that double transportation charges were thus undergone. The home market argument ap-

⁹ *Prairie Farmer*, 9: 369.

⁷ *Trans. of State Agric. Soc.*, 1851, p. 184.

⁸ *Ibid.*, p. 151.

⁹ *Prairie Farmer*, 11: 480.

¹⁰ *Milwaukee Sentinel and Gazette*, Aug. 3, 1850. See also *Ibid.*, Mch. 1, 1850.

¹¹ *Trans. of State Agric. Soc.*, 1851, p. 180 ff.

¹² *Ibid.*, p. 225 ff.

¹³ See *Wis. Farmer*, 14: 61; *Ibid.*, 18: 256.

pealed to the wheat grower the more forcibly because when he found a strong demand for his grain at home he received the price at some other point plus the cost of transportation and distribution. When the time came that the supply exceeded the demand, he, of course, received the outside price less the cost of transportation. Continued immigration put off the evil day when this latter contingency would arise. The newly arrived immigrants had to be fed at first, even though they settled down and went to raising wheat themselves and thus became, later, competitors of the older settlers. In their turn, they depended upon further immigration for a market, or upon the growth of manufactures and the development of a wage-earning class. It is evident that the market found in immigration was self-destructive. This was the more true in a region that was peculiarly favorable to agriculture and where a majority of the immigrants, attracted by the opportunity of becoming land owners on easy terms, settled down as cultivators of the soil.¹⁴ Not only did the newly arrived immigrant become a farmer, but he became a wheat farmer. Natural conditions of climate and soil favored, and, as we shall see, there were other conditions which lent their influence in the same direction. Furthermore, the development of manufactures requires considerable labor and capital, two factors that were scarce in frontier Wisconsin, just as they are scarce in every frontier region.¹⁵

Together with a keen appreciation of the advantages of a

¹⁴ Out of a total male population of 78,139 in professions, occupations and trades in Wisconsin in 1849, there were, according to the *Seventh Census*, 40,865 farmers, 11,206 laborers, 3,639 carpenters, 3,001 miners, etc.

¹⁵ Milwaukee manufactures amounted in value to \$1,714,200 in 1849. These included as the most important, in the order named, foundries; cabinet ware; leather; carriages and wagons; tin, sheet iron and copper ware; clothing; boots and shoes; wooden ware and wood turning; malt liquors. There were one steam and five water flouring mills, with a total capacity of 80 to 100 barrels per day.—*American R. R. Journal*, 1850, p. 344.

Racine was already becoming important in the manufacture of farm implements and machinery. Henry F. Cox and Company manufactured "H. Herdan's Patent Threshing Machine, Cleaner and Stacker." In 1849 Case erected his first shop in Racine and during that year he built nearly one hundred of his threshing machines. (*Wis. Farmer and Northwestern Cultivator*, Feb. 1850; *History of Kenosha and Racine Counties*, Chicago, Western Historical Company, 1879, p. 459.)

The value of home manufactures in Wisconsin is given by the census of 1850 as \$43,624.

home market and of the losses involved in double transportation, the early wheat grower in Wisconsin combined an instinctive dread and distrust of monopolies, a common enough feeling on the democratic frontier.

The interests of the commercial class lie in just the opposite direction. Double transportation, not necessarily in an objectionable sense, is bread and butter for that class. It is not surprising then that the initiative for an outlet for the surplus produce of the state should have come from that class. Not until the home market broke down did the farmers of Wisconsin as a class come to the support of the movement for railroads. Even then there was a preference for plank roads,¹⁶ and when finally they rallied to the support of railroads, it was not that the sentiment of that class against monopoly had disappeared but that it was taken advantage of by shrewd men who pointed out to them that they themselves should subscribe to the stock of the corporations and thus secure control of the roads.¹⁷ The farming class thus made the mistake of trying to be interested in both farming and transportation, instead of seeing to it that there was effective control by the state. Notwithstanding the feeling against monopoly, there was no adequate appreciation of the real nature of railroad transportation. The relations between the wheat grower in Wisconsin and the common carrier, we shall take up in a later chapter. We need only to note here the early distrust of the latter by the farmer, the fact that he felt little interest in the railroads until the failure of the home market forced him to look for a market outside of the state, the further fact that to obtain the railroads he rashly loaned his credit, secured by land already heavily hypothecated, and lastly the fact of his complete and not unnatural ignorance of the principles involved in the system of transportation by rail.¹⁸

¹⁶ See pamphlet, *Plank Roads: Report on their Utility and Economy*, by a Committee, made to a large Plank Road meeting in Racine, Jan. 14, 1848. Racine, 1848.

¹⁷ See Meyer, B. H., *History of Early Railroad Legislation in Wisconsin*, *Wis. Hist. Col.*, 14: 222 ff. Also *Transactions of the Wisconsin Academy of Sciences, Arts and Letters*, 12: 354 ff.

¹⁸ See Meyer, *History of Early Railroad Legislation in Wisconsin* in *Wis. Hist. Col.*, 14: 206 ff. See also Hibbard, B. H., *History of Agriculture in Dane*

Another difficulty, however, beginning about 1847, beset the wheat farmer in Wisconsin. Crop failure and decline in yield added to the difficulties of low price and the breakdown of the home market. It was possible for crop failure and overproduction to occur at the same time on account of the ever increasing area cultivated to wheat.

Numerous causes were assigned for this decline in yield and frequent crop failure. Among the most common of these were unfavorable seasons for both seeding and harvest, deterioration in seed, insect pests and successive cropping year after year to wheat without rotation. In respect to unfavorable seasons, it seems that to a certain extent this was true. It was noted, however, that there was little difficulty with crop failure on new land.

There was doubtless some truth also in the complaint about the deterioration of seed. The possibilities in plant breeding at the present time prove it more than likely that the general system of culture followed by these early wheat farmers, which was by all testimony extraordinarily bad, would also be deficient on the side of seed selection.

Insect pests are now considered to be destructive only where continued cropping is practiced and, therefore, need not be considered apart from that connection.

The one great cause assigned almost universally for the series of crop failures was that of so-called soil exhaustion due to continued and successive cropping to wheat. The present theory as to soil exhaustion strengthens our inclination to believe in the

County, Wisconsin, Bulletin of the University of Wisconsin, No. 101, p. 134 ff. While making a study of the agriculture of Dane County, which he considers typical, in most respects, of the state, Mr. Hibbard discusses in an apparently satisfactory manner the general conditions throughout the state in reference to transportation about 1850. I am not disposed to entirely agree with Mr. Hibbard in his disparagement of the home market sentiment among the farmers. No doubt the possibilities of a home market were over-estimated by that class, but their later experience with railroads and the fact that after all they were forced into diversified farming wherein they depended more upon a home market and were less dependent upon the railroads seem to justify both their original preference and their suspicious attitude toward the latter. Mr. Hibbard himself has a little later vividly pictured the disappointment of the farmers in their hope that the railroads would minister to their interests. (See *Wisconsin Palladium*, June 26, 1852).

correctness of this opinion.¹⁹ That such were ordinarily the results was of course familiar to most western people, from their knowledge of the soils in the older parts of the country. As early as 1845 a writer in the *Milwaukee Courier* sounded a note of warning.²⁰ "Wheat has thus far been the staple crop of Wisconsin and will probably continue to be so for some years to come. But we farmers will do well to remember before it is too late that we have hitherto been depending upon the natural fertility of the soil for the abundance of our yield rather than upon thorough tillage, rotation of crops, manuring, etc." Attention was called to the fact of declining yield in Ohio and Michigan, and an appeal was made to the farmers of "Walworth, Rock, Jefferson and other counties" for better methods of cultivation and an abandonment of continuous wheat cropping.

During the years 1849, '50 and '51, countless references can be cited testifying to the continued failure of the wheat crop and usually ascribing the failure to successive seeding to that crop: "We are confident that very many of our farmers would find it much to their advantage to turn their attention to dairying and let alone the growing of so much wheat. Wheat growing is now pursued greatly to the neglect of other branches of farm business."²¹ "The wheat crop, our great staple, in many portions of Illinois and Wisconsin has proved essentially a failure

¹⁹ Many no longer believe in the theory that the chief difficulty lies in the removal from the soil of the elements necessary for the growth of the particular plant. Soil analysis of so-called exhausted soils reveals the presence of the required elements in quantities but little diminished. (See King, *Physics of Agriculture*, 80 ff. Also an article in the *Popular Science Monthly*, November 1906, by J. B. Dandeno of the Michigan Agriculture College, on *Soil Fertility*.) The tendency today is to lay less stress upon the chemical constituents of the soil and more upon its physical condition. That is, plant growth depends as much upon the rapidity with which the chemical elements which enter into combination for the nutriment of the plant are set free, i. e., upon availability, as upon the absolute presence of those elements in the soil. Now the universal testimony is that continued cropping to one crop brings about such a condition of the soil that under ordinary conditions a decline in yield results. Proper rotation of crops, on the other hand, induces such a condition of the soil as renders the various elements most easily and rapidly available. (See *Trans. of State Agric. Soc.*, 1851, p. 191. See, however, Hopkins, Cyril, G., *Phosphorus and Humus in Relation to Illinois Soils*, Circular No. 116, University of Illinois, Agricultural Experiment Station, Urbana, Feb., 1908.)

²⁰ *Mineral Point Democrat*, May 2, 1845.

²¹ *Wis. Farmer and Northwestern Cultivator*, 1: 144.

for three years in succession. . . . Wheat growing has proved utterly untrustworthy. . . . It is more unprofitable than either of the three great divisions of northwestern agriculture,—pork raising, stock growing and dairying. . . . For several years wheat in every stage has been doomed to double risk, labor and expense, while the market has generally been at a low point in consequence of the almost illimitable amount produced and the inferior quality of a large share, and yet here it is all wheat, wheat, wheat, etc.’”²²

“While we are reaping an average of 15 bushels of wheat per acre, we can with proper management produce twice or even three times that amount. When the farmers get over the grain mania and turn their attention to the growing of stock, so as to escape the influence of the fluctuations of the seasons and markets, no longer will be heard the cry of hard times, etc.’”²³

“Walworth County Wheat Crop.—Winter wheat has been most gloriously uncertain for a long time. . . . Lately spring wheat has been also very uncertain. For several seasons in succession the wheat crop has fallen miserably short either in quality or quantity, causing great loss and embarrassment to our farmers.’”²⁴

In the report on the “Agricultural Condition and Capacity” of the various counties of Wisconsin referred to above, testimony is well-nigh unanimous as to the recent failure of the wheat crop. In Iowa county winter wheat had been gradually failing for five or six years. The average yield in 1851 was 15 bushels for winter wheat and 12 bushels for spring wheat.²⁵ In Columbia county the crop had been short for two or three years.²⁶ Dane county had experienced an almost entire failure for four years.²⁷ Similar testimony came from Dodge county.²⁸ Fond du Lac county

²² *Wisconsin and Iowa Farmer and Northwestern Cultivator*, 2: 216. See *ibid.*, 263.

²³ *Ibid.*, 1: 210.

²⁴ *Wis. Farmer and Northwestern Cultivator*, 1: 248. See also *ibid.*, 3: 2; *Cf. also Prairie Farmer*, 9: 271; *Wis. Farmer*, 3: 145.

²⁵ *Trans. of State Agric. Soc.*, 1851, p. 106.

²⁶ *Ibid.*, 133.

²⁷ *Ibid.*, 153.

²⁸ *Ibid.*, 163. U. S. Pat. Office Rep., *Agriculture*, for 1850, p. 8.

reported partial failure of the wheat crop for several years.²⁹ Reports from Jefferson, Kenosha, Racine, Rock, and Walworth counties vary only in the degree of failure indicated.³⁰

Another fact to be noted in this connection and which added to the seriousness of the situation was that crop failure occurred in respect to winter wheat in particular and at that time winter wheat was worth from 10 to 15 cents, and sometimes from 18 to 20 cents more in the market than spring wheat. With the old milling processes, the hard, brittle bran of the spring wheat was broken into fine particles and could not be satisfactorily separated from the flour. When winter wheat passed safely through the winter it usually yielded well, but by 1850 it had become an extremely uncertain crop in the Northwest generally.³¹ Winter wheat was, however, successful in Winnebago county, an average of from 20 to 40 bushels per acre being secured. This was a comparatively newly settled region and the evil effects of continued cropping to wheat were not yet apparent.

What were the causes of this persistent tendency to grow wheat exclusively? To this question we have many contemporaneous answers, and there is a very general agreement in respect to the causes assigned. These were, in general, the scarcity of labor and capital on the one hand, and the great plenty and cheapness of fertile land on the other, together with the fact that wheat has always been a great cash crop.³²

Here again it seems clear that we can endorse contemporaneous opinion. Of course there were other contributing causes and it is also possible to make a more refined analysis of the causes

²⁹ *Trans. of State Agric. Soc.*, 1851, p. 106.

³⁰ *Ibid.*, pp. 170, 177, 187, 210, 225, and 230. In reference to the failure of the wheat crop in the Northwest generally, see *Prairie Farmer*, 9: 271: 10: 278, 73, 137, 349; 11: 429-430.

³¹ But little winter wheat had been sown in the Northwest (crop of 1849-50) on account of continued losses. *Prairie Farmer*, 10: 18, 233, 259, 266, 278-9; 11: 56.

³² For a most excellent discussion, *Considerations on the causes and effects of the diminution of American Crops*, by Gustavus De Neveu of Fond du Lac, Wis., see U. S. Pat. Office Rep., *Agriculture*, for 1858, pp. 213-220. The cause is asserted to be sparseness of population. "As long as there shall remain vast tracts of unoccupied virgin soil, of exceeding fertility, to be had for a low price, so long must agriculture be carried on in a loose and careless manner, particularly in the neighborhood of those lands."

generally assigned as the main causes. At first sight and in consideration of the more evident specialization in wheat after the introduction of railroads, the problem might seem to be one of transportation primarily. This, however, is plainly incorrect; for we find this specialization existing with all the concomitants of declining yield, crop failure, and consequent agricultural depression before there was a mile of railroad in Wisconsin. As to other methods of transportation, we have seen that early conditions in transportation were not such as to encourage the production of wheat, notwithstanding the fact that access to Lake Michigan gave an outlet to the East. It can be granted, however, that increased facilities for transportation gave an added impetus to a tendency that had its origin in the other conditions mentioned.

It may be argued that overspecialization in the culture of wheat was due to the fact that natural conditions are peculiarly adapted for growing that grain.³³ But this can hardly be maintained in the face of the fact that other branches of agriculture have been shown to be just as well adapted to natural conditions in Wisconsin as wheat, perhaps even more so.³⁴ Natural adaptation was, of course, a contributing cause. The tendency to produce wheat exclusively was due primarily to the conditions mentioned above, and these conditions have always been present to a greater or less extent on the frontier. That these conditions should have borne fruit to an unusual degree was due to the fact that circumstances were peculiarly favorable. Most of the settlers who took up land in Wisconsin were persons of small means³⁵ and the opportunity of becoming the possessor of large tracts of fertile land on easy terms, so that one crop would almost pay for the land itself in addition to the expenses involved in the cultivation of the crop, invited an undue extension of credit, to the end that more and more land might be secured. This in its turn put a premium on extensive cultivation and for this

³³ See *Soil Map of Wis., Twenty-second Ann. Rep. of Agric. Exper. Station of U. of Wis.*, 1905, pp. 262-263.

³⁴ Dairying and the culture of oats, barley, rye, tobacco and hops might be mentioned in this connection.

³⁵ *Trans. of State Agric. Soc.*, 1851, p. 133.

sort of culture wheat is peculiarly adapted on the frontier. It required but relatively little labor and capital and with the most careless methods of cultivation yielded large returns at first.³⁶

Further, no commodity that the early farmer in Wisconsin could raise had such a ready sale. It was as "good as money"—actually passed as money in many cases.³⁷ A glance into the files of the newspapers of the period will show how largely wheat passed for a medium of exchange. Not only was it the best cash crop but it could be traded for such articles of merchandise as the farmer needed. The wheat was often stored in private warehouses and wheat "receipts," "tickets," or "certificates," as they were variously termed, were issued, and passed from hand to hand like money. The phrase "as good as wheat" was a current expression at this time.³⁸ In Racine, wheat in the warehouses served "as a basis of frequent and large business operations" during the months when the lake navigation was closed.³⁹

A writer in the *Prairie Farmer*⁴⁰ says "the wheat crop is the great crop of the Northwest for exchange purposes. It pays debts, buys groceries, clothing, lands, and answers more emphatically the purposes of trade than any other crop." Again, "Well, we have a wheat crop once more. We can now pay our debts, build us houses, barns, fences, etc."⁴¹

Instances might be multiplied many fold to show to what extent wheat was depended upon as a cash crop for the means to meet interest payments or debts, or to trade for necessities. That land was secured on liberal terms should not deceive us. These liberal terms were fully discounted, and, at any rate, the term "liberal" must be interpreted in the light of the financial cir-

³⁶ See *Northwestern Miller*, Nov. 8, 1878, for similar case in Minnesota. See also Pat. Office Rep. *Agriculture*, for 1850, p. 8.

³⁷ See *Governor's Message and Accompanying Documents*, 1857, 2: 429.

³⁸ "Such has been the system of barter (in Fond du Lac county) that it would be difficult to say what has been the price." *Trans. of State Agric. Soc.*, 1851, p. 167.

See also *Southport American* for June 29, 1843; February 7, 1849; Mch. 28, 1849. See *Prairie Farmer*, 10: 165.

³⁹ *Sen. Miscel. Doc.*, No. 60 (p. 14), 31st Cong., 1st Sess., (Communication from Philo White, in behalf of the citizens of Racine, Wis., showing the necessity of continuing the improvement of the harbor at that place, Feb. 27, 1850).

⁴⁰ *Prairie Farmer*, 10: 52. See also *Ibid.*, 258 and 278.

⁴¹ *Ibid.*, 266. See *Trans. of State Agric. Soc.*, 1851, pp. 183, 161-162.

cumstances of the purchasers. Interest rates were as high as land was low and the cheapness of the latter merely enticed the settlers to go more deeply into debt in order to extend their purchases.⁴² The bad conditions in reference to insolvency and indebtedness about 1850 led to the appointment of a judiciary committee by the assembly to investigate and bring in a report, with a view to revising the usury laws.⁴³ Both majority and minority reports agree as to the general distress, though differing as to remedies proposed. Particular mention is made of the farming class. They are said to have borrowed money for improvements, relying upon their crops in order to meet their obligations. When harvest time came their crops failed and as this had been a universal occurrence for two years, the burden kept growing heavier, without any means of relief being found.

A committee appointed the same year on "Land Limitation" found⁴⁴ that for at least three years the farmers of Wisconsin had suffered either from short crops or from injuries to grain in harvest or from the difficulty of getting the grain to market because of bad roads. It was suggested that the difficulty was partly the result of land monopoly. "Farmers tilled such large fields that they could not attend to them properly." A mild sort of limitation on the amount of land that could be held by one person was favored.⁴⁵

The general situation is well set forth by one who contributed frequently to the discussion of farm topics. After noting the "mania among the Northwest upon the culture of wheat" in consequence of which the "health, comfort, happiness and the general interests of the community are but secondary considerations to the waving field of grain, which in their estimation is

⁴² "Another cause of depression is the prevailing indebtedness. The early settlers had limited means, and good crops and high prices tempted them into indebtedness. Then pay day and short crops came at the same time and the results were ruinous. Homesteads were involved at rates of interest varying from fifteen to fifty per cent. California seems the only resource and to that gilded region many a Walworth county farmer is preparing to flee as to a city of refuge." *Trans. of State Agric. Soc.*, 1851, p. 230.

⁴³ *Appendix to Assembly Journal*, 1851, pp. 1047-1101.

⁴⁴ *Ibid.*, 1105-1109.

⁴⁵ See Gregory, *The Land Limitation Movement in Parkman Club Papers*, 2: No. 14.

equal to the golden harvest of California," the writer asserted that this specialization was common in all new countries and was due to poverty. "The early settlers must resort to the means which promise the most sure and speedy return for their labor; and the cultivation of wheat promises them under ordinary circumstances the highest rewards for their labor, the best investment for their capital. That article always commands cash at some price and necessarily excludes many other productions from the market. This concentration of labor and capital in the production of wheat leads to overproduction and defeats the object in view, while the community is injured by the withdrawal of labor and capital from other branches of agriculture." An appeal was made to farmers to follow a more diversified system.⁴⁶

W. W. Daniells,* Professor of Chemistry and Agriculture at the University of Wisconsin, summed the matter up as follows: "People are everywhere saving of the costly factor and extravagant of the cheap factor; hence the early agriculture in Wisconsin was mere land skinning. Better tillage, accompanied with the use of manures and other fertilizers, would not, upon the virgin soil, have added sufficiently to the yield to pay the cost of applying them. Hence to the first farmers of the state, poor farming was the only profitable farming and consequently the only good farming, an agriculturo-economical paradox from which there is no escape." Still, Professor Daniells maintains that such a system was injurious to the state, and he might have added, ruinous to the farmers themselves in the long run.⁴⁷

In a study of the *Economic and Social Development of Kenosha County*, Robert Hugh Downes finds⁴⁸ that the towns inhabited by foreigners held to the cultivation of wheat, oats and Indian corn, while those inhabited by natives went into the dairy business. He concludes that the decline in the population and the smallness of cash value and total valuation per capita that was

⁴⁶ *Wisconsin and Iowa Farmer and Northwestern Cultivator*, 2: 263, by Solomon Lombard.

⁴⁷ *History of Racine and Kenosha Counties, Wis.*, Chicago: Western Historical Co., 1879, p. 153.

⁴⁸ *Trans. of Wisconsin Academy of Sciences, Arts and Letters*, 13: 545 ff.

*Now Emeritus Professor of Chemistry.

found at a later period among the former class when compared with the latter was due not so much to the soil as to the nativity of the people and that the Germans, English and Irish evidently lacked the ability to adapt themselves to the economic changes and to agricultural improvements; and that, on the other hand, the native-born took advantage of such changes and improvements and thus bettered their condition.

It is not clear, however, that this attempt to make persistence in the culture of wheat a question of race characteristics can be justified. In the first place the Germans and English pursued better methods of cultivation at home than those followed by farmers in the eastern part of the United States, whence came the native settlers. Again, there is no contemporaneous testimony that foreign settlers were in general greater sinners than the natives in the constant cropping to wheat alone or that their methods were inferior. On the contrary, direct testimony is borne to the industry and careful tillage of both English⁴⁹ and German⁵⁰ settlers. Much is said, however, in disparagement of the "French system" of cultivation. The foreign settlers had even smaller resources than the natives⁵¹ and were, thus, on account of financial reasons less able to adapt themselves to new conditions or to change their methods.⁵² Accordingly, financial difficulties would appear to still remain the ultimate cause of the one-crop system.

On the other hand, the native element was habituated to the growing of wheat. The wheat crop declined 50 per cent. in New England, and 25 per cent. in New York during the decade 1840-1850,⁵³ and immigrants from these two sections, and especially from New York, which had been shortly before the center of the

⁴⁹ Hibbard, *Hist. of Agric. in Dane Co.*, 127. See also Pat. Office Rep: *Agriculture for 1852*, p. 331.

⁵⁰ *Trans. of State Agric. Soc.*, 1851, p. 234. Also Gregory, *Industrial Resources of Wis.*, 1853, p. 62.

⁵¹ Hibbard, 90. See senior theses of the University of Wisconsin referred to just below.

⁵² See *Bulletin* No. 60, U. of W. Agricultural Experiment Station, pp. 17-18. *The Cheese Industry: Its Development and Possibilities in Wisconsin*, which appears to support the position taken here, so far as the cheese industry is concerned.

⁵³ *Wis. Farmer*, 10: 337.

wheat growing area, constituted a very large proportion of the early settlers of Wisconsin.⁵⁴ It is not unreasonable to suppose that there was a close connection between the arrival of these New England and New York settlers and the subsequent specialization in wheat growing. This presumption is strengthened by the further fact that the later movement of the wheat area across Wisconsin was accompanied by a similar movement of the New England and New York element. That element declined proportionately and to such an extent as to indicate large migration in those counties where wheat growing declined, while the foreign element, especially the Germans, increased largely.⁵⁵ Further, it is found that the New York and New England settlers predominated in the prairie regions, which were best adapted to wheat growing, while the foreign stock was most numerous in the wooded districts.⁵⁶ This tendency toward wheat growing due to economic habit was, however, strongly reënforced by economic conditions on the frontier. In fact, the latter decidedly prevailed where the two ran counter. This fact is illustrated by the slow progress made in the attempts by the Ohio settlers to introduce the tobacco growing and the wool growing industries.⁵⁷ The Swiss element, too, yielded to the influence of early economic conditions, until the acquired habit of wheat growing gave away, in turn, before changed economic conditions which induced a reversion to dairying.⁵⁸ In like manner, the Scandinavian element in Dane county acquired the habit of wheat growing to such an extent that upon the failure of the crop in that county about 1870, many sold off their farms and

⁵⁴ MSS. Senior Theses, University of Wisconsin: Blackburn, A. W., *Some Social and Economic Factors in the Development of Racine County*, (1901); Sherrill, Jennie Bentley, *History of the Eastern Half of Columbia County*, (1902); Harrigan, Frank Elwood, *The Economic and Social Factors in the Development of Dane County* (1901); Chamberlain, Alice Emily, *History of Dodge County, Wisconsin, for the period, 1850-1870*, (1902); Fish, Herbert Clay, *The Movement of the New York and New England Elements of the Population of Wisconsin in the periods, 1850 to 1860, and 1860 to 1870* (1903); et al.

⁵⁵ *Ibid.*

⁵⁶ Graham, James Blain, *An Economic and Social Study of the Population of St. Croix County, Wisconsin, during the period, 1850-1870*. MS. Senior Thesis, Univ. of Wis., (1901). See Hibbard, pp. 107-112.

⁵⁷ Hibbard, 145.

⁵⁸ See below, p. 77, notes 18 and 19.

like the native stock moved on toward the frontier and were replaced by the Swiss, who introduced dairying. After about 1891, however, the Scandinavians succeeded in adapting themselves to dairying and again increased their holdings of land within the county and in the year 1898 over 80 per cent. of the total cheese product of Dane county was produced in the seven towns which comprised the Scandinavian section in the western part of the county.⁵⁹ Economic habit and race characteristics are thus seen to have been subordinate factors, but to have exercised a strong influence when reënforced by favorable economic conditions.

We have concrete examples of the financial difficulty involved in making the change to a diversified agriculture. One such is given in the *Wisconsin and Iowa Farmer and Northwestern Cultivator*.⁶⁰ A correspondent, in discussing the comparative profit of wheat growing and sheep raising, stated that he had made a success of wheat growing from 1837 to 1847. Then followed crop failures for three years, with unsuccessful attempts to go at something else, want of success being due to lack of means. In 1851 he succeeded in borrowing money and going into sheep raising, which proved profitable.

If indebtedness and lack of capital kept many farmers raising wheat exclusively until crop failure and soil exhaustion ensued, the latter conditions were in their turn instrumental in forcing a system of diversified agriculture. When the time came that wheat could be no longer raised at a profit, some other means had to be found to get money to meet interest payments and taxes. Declining profits constituted a sufficient reason for inducing those in better circumstances to turn away from specialization in wheat. It appears that this latter class was the first to try something else. The former in many cases merely went into bankruptcy.

That the Wisconsin State Agricultural Society was organized about this time is significant. Farmers were aroused to the fact that something needed to be done. For a long time there had

⁵⁹ Michelson, Albert G., *The Scandinavians in Western Dane County*. MS. Senior Thesis, Univ. of Wis., 1901.

⁶⁰ 6: 247.

been exhortation in favor of diversified farming and crop rotation. An organized effort was now to be made to improve conditions in general. The direct statement is made in reference to the Rock County Agricultural Society that it was founded in order to overcome the depression which had followed the failure of the wheat crop. This forced tendency to diversification was naturally most marked near the markets in the earlier settled portions where soil exhaustion had been carried farthest and where opportunities were most favorable for such change. The rise in the value of land forced a better and more intensive system of agriculture. Land became relatively more valuable as compared with the other factors in production and farm pursuits that were less expensive of land began to find favor. It was recognized by many that the failure of the wheat crop might prove a blessing in disguise if it compelled a better and more varied system of agriculture. In 1851 a successful attempt was made to grow flax in Dane county,⁶¹ though results were not favorable in other parts of the state. Attempts were made at sheep raising about the same time in Dane county.⁶² In Kenosha county the wool growing industry had begun to attract the attention of the most enterprising farmers and some attention was also paid to dairying.⁶³ An Ohio farmer traveling in Waukesha county at this time declared that the farmers there had better sow less wheat and grow more wool.⁶⁴ Reference has already been made to individual attempts to grow wool.⁶⁵ Experiments in the culture of tobacco had been made in Rock county about 1840 and now these experiments were renewed in several of the southern counties.⁶⁶ Farmers were abandoning wheat growing as an exclusive crop in Walworth county and large fields were being sown with tame grasses preparatory to a more general rearing of stock.⁶⁷ In Dodge county a system of rotation

⁶¹ Hibbard, 147.

⁶² *Ibid.*, p. 145. For hop culture in Wisconsin at this time see *ibid.*, p. 149.

⁶³ *Trans. of State Agric. Soc.*, 1851, p. 179. See also Pat. Office Report, *Agriculture*, 1851, pp. 464-465.

⁶⁴ *Ibid.*, 235.

⁶⁵ *Supra* p. 30.

⁶⁶ Hibbard, 156.

⁶⁷ *Trans. of State Agric. Soc.*, 1851, p. 230.

had produced very satisfactory results,⁶⁸ and in Racine county the shrewdest farmers were said to be more and more diversifying their crops.⁶⁹ In Milwaukee county farms were smaller and better cultivated than on the prairie and diversified farming was followed to a considerable extent.⁷⁰ Dane county imported, besides agricultural implements and foreign merchandise, "cheese, butter and pork frequently, grass seed, cattle and horses."⁷¹ Evidently there was room for diversification here.

The use of improved farm machinery had become important by this time, though the numerous advertisements of cradles and rakes in the local newspapers indicate that the harvester was by no means general. This was especially true in the "oak openings" where it was difficult to use machinery on account of the stumps.⁷² According to the Ohio traveller mentioned above, the McCormick reaper was in general use in Waukesha county. It was asserted that in five years very little wheat would be cut otherwise than by machinery on the smooth lands of the West.⁷³ Complaints were made, however, that the new machines came high in price, that they were not always constructed of good material, and the familiar statement was made that they failed to do satisfactory work in lodged grain.⁷⁴ It was estimated that not less than 3,500 new reaping machines would be put into use in

⁶⁸ *Ibid.*, 163. See also Pat. Office Rep., *Agriculture*, 1850, p. 8.

⁶⁹ *Ibid.*, 164.

⁷⁰ "Land is scarce and every reason impels to cultivate it well. Manure is made use of. The farmer is obliged to diversify his crop, as wheat is almost a total loss one year out of five and a failure more or less extensive the other four years. To depend on wheat here would be perfect madness. The farmer here must have a little of everything that will sell—a little mutton, a little wool, veal, butter, eggs, potatoes, wheat, straw, barley, wood, and, in fact, a multitude of things."—*Prairie Farmer*, 9: 290.

⁷¹ "This policy is ruinous and will conduct to inevitable bankruptcy. My advice is to keep out of debt, change and improve your mode of husbandry, own and cultivate less land and expend your profits on your own farm."—T. T. Whittlesby, *Trans. of State Agric. Soc.*, 1851, p. 162.

⁷² *Prairie Farmer*, 10: 34. See also Hibbard, p. 128 ff.

⁷³ *Prairie Farmer*, 10: 30, contains a list of reapers and headers used in Illinois, many of which were probably used in Wisconsin as well. Among these appears Esterly's "header", invented by George Esterly of Heart Prairie, Wisconsin. See Pat. Office Rep., *Agriculture*, 1851, pp. 460-462, for an article by Esterly on harvesting grain in the West, with estimates of the saving in cost by the use of reapers.

⁷⁴ *Wis. Farmer and Northwestern Outfitter*, 1: 249; *Prairie Farmer*, 10: 34.

1850 in the Northwest, and it was calculated that this would amount to a saving of the labor of 175,000 men. This was of importance in view of the fact that the labor supply was being diminished by emigration to California.⁷⁵

Wheeler's "tread machine" threshers had been introduced extensively into Illinois, Iowa, and Wisconsin about 1850, and had competed successfully with the larger "sweep machines" of eight horse power and operated by eight men.⁷⁶ Reference has already been made to the manufacture of the Case threshers in Racine and the advertisement of the Case two-horse power thresher appears in the pages of the farm journals of that period. Bain's thresher was another Racine product.

The introduction of these labor saving machines constituted an important factor in the spread of the wheat area. An industry toward which there was already a strong tendency, due in part to the fact that it required a relatively small amount of the scarce factor, labor, became now less than ever dependent upon that factor. The effect was decidedly toward more extensive culture, and when a little later the railroad opened up a market for Wisconsin wheat, the grain drill, the harvester, the header and the thresher were all at hand to assist in the phenomenal spread of that industry in the state.

According to the census of 1850, there were 1,045,499 acres of improved, and 1,931,159 acres of unimproved land in Wisconsin. Comparison with the corresponding figures for 1900—11,246,972 improved and 8,615,755 unimproved—indicates how small a portion of the area of Wisconsin had been brought under cultivation and pasturage at the former period. Up to this time government land had been secured at about the minimum price of one dollar and a quarter per acre, and so long as this land was in the market there was little opportunity for speculative dealing. This opportunity had been taken advantage of and the increase in population in Wisconsin between 1840 and 1850 was almost unprecedentedly rapid. The editor of the *Wisconsin Farmer and Northwestern Cultivator*,⁷⁷ in an answer to the in-

⁷⁵ *Ohio Cultivator*, July 15, 1850.

⁷⁶ *Prairie Farmer*, 10: 21.

⁷⁷ 2: 44. Feb. 1850.

quiries of a prospective immigrant, stated that he "knew of no land south and east of the Wisconsin River that could be bought for less than about five dollars per acre."⁷⁸ Sales of improved land had been made at twenty-five dollars per acre, while the cheap and fertile lands west of Lake Winnebago proved most attractive to settlers. This latter region was being settled more rapidly than any other part of the state."⁷⁹

A land agent in Milwaukee advertised two hundred thousand acres of choice lands for sale in the State of Wisconsin in 1850 at from one dollar and fifty cents per acre upwards, in lots to suit purchasers and on liberal credit. Fifty thousand acres of this land consisted of lands from one to four miles from the Fox River. One thousand acres were located from one and a quarter to three miles from Milwaukee. In addition, there were one hundred improved farms in Milwaukee county in the lot.⁸⁰

Hibbard states⁸¹ that it was during the early 50's that the greater part of the state lands was sold, and calls attention to the detriment to the state treasury, and to the injustice to the later settler in disposing of the lands at such low figures. He might have added, what has already been noticed, that the settlers themselves were hardly benefited by these low prices; that it merely induced them to take up more land than they could readily pay for and cultivate properly, and that it was the prime cause of exclusive cropping to wheat, with all the accompanying evils.

In the midst of the general cry of distress, occasional successful ventures in wheat raising were announced, and we must remember that not a few persons in poor circumstances took advantage of the opportunity to secure the cheap, fertile lands and by careful management gained a clear title and became pros-

⁷⁸ This must have referred to improved lands, for Ritchie, *Wis. and Its Resources*, 1857, p. 111, stated that but one-sixth of the land of Dane county was then settled.

⁷⁹ *Wis. Farmer*, *supra*, Note 77. See also *Prairie Farmer*, 9: 288-289.

⁸⁰ *Wisconsin and Iowa Farmer and Northwestern Cultivator*, 2: 211.

⁸¹ Page 104.

perous and well-to-do citizens.⁸² Apparent success was obtained in most cases, however, by compromising the future and by a reckless system of soil exploitation.

Whatever may have been the conditions in specific cases it is undeniable that conditions were very discouraging for the Wisconsin wheat farmer in general at the period which we are considering. Low prices, crop failure, high cost of transportation and the break-down of the home market were about to force him into a more diversified system of farming. But habit, and financial difficulties and embarrassments conspired to prevent the change. Under these conditions, the argument for an outside market, to be reached by a system of transportation on the one hand demonstrably effective and on the other adroitly asserted

⁸² (a) "Wheat raising in Crawford County. The results are for forty-five acres of wheat harvested in this county in the fall of 1849.

Cost of preparing the ground, sowing and harrowing	\$80 00
For seed wheat	35 00
For harvesting and threshing	160 00

Total expenses	\$275 00
One thousand and sixty-five bushels of wheat at 63 cts. per bushel	\$670 95
Net profits from the crop	395 95

"To the expenses incurred may be added the expense of drawing to market and some other small items which would probably reduce the net proceeds, if every item were paid in wages, to about \$450" [\$350?].

Wis. Farmer and Northwestern Cultivator, 2: 11.

(b) "Report of 300 acres of winter wheat grown by Mr. Carey in Rock county, ten miles from Beloit, on Jefferson Prairie:

300 acres of land at 10 s. per acre	\$375 00
Fencing	300 00
Breaking at 14 s. per acre.....	525 00
Seed, 1½ bu. per acre at 5 s. per bu.....	281 25
Sowing and harrowing at 8 s. per acre.....	300 00
Harvesting and stacking at 10 s.....	375 00

Total cost in stack	\$2,156 00
Yield estimated (partly threshed) at over 6,000 bushels. Deduct 600 bushels (1-10 for threshing and cleaning) and add	810 00
the cost of transporting 5,400 bushels to Southport (55 mf.), computing the cost of hauling and delivering it at 15 cts. per bushel, and you have	2,996 25
as the total cost. Sold at 60 cts., or	3,240 00
Net gain (not counting for labor) 300 acres of good land, well fenced and thoroughly improved and \$243.75 in cash."	

Southport American, Nov. 25, 1843.

to be under his own control, overcame the farmer's scruples against railroads. He hastened to pledge his already encumbered land for the completion of the proposed enterprise or was forced into such action by methods that were often of the most questionable character.⁸³ A rise in the price of wheat occurring a little later, due to outside causes, plunged him back into the old rut of exclusive wheat culture and sent him on "a new crusade in search of wheat land."⁸⁴

⁸³ Meyer, *History of Early Railroad Legislation in Wisconsin*, *supra*.

⁸⁴ Hibbard, 130.

NOTE.—The Sixth Census of the United States gives the following statistics of the production of wheat in Wisconsin, by counties. It is, however, uncertain whether the figures are for the crop of 1839 or for the crop of 1840. [See *History and Growth of the United States Census*, by Carroll D. Wright and William C. Hunt, p. 32. (Washington, 1900)]. For alleged gross inaccuracies in the Sixth Census see *House Reports*, 28th Congress, 1st Sess., vol. III, No. 580:

Brown	7,614	Marquette .....	.....
Calumet	1,192	Milwaukee	34,236
Crawford	2,092	Portage	1,815
Dane	290	Racine	36,099
Dodge .....	.....	Rock	24,702
Fond du Lac	320	Sauk	464
Grant	10,796	Sheboygan	548
Green	11,953	St. Croix	74
Iowa	12,945	Walworth	59,560
Jefferson	6,647	Washington	182
Manitowoc	225	Winnebago	362
Total			212,116

PART II

THE WHEAT INDUSTRY IN WISCONSIN AFTER 1850

CHAPTER I

THE DECADE 1850-1860

Before taking up the history of the wheat industry after the advent of the railroads, we must note two other factors of importance in the rapid spread of that industry. The first of these two factors is the natural adaptability of most of the soil of Wisconsin for the cultivation of wheat, and was, of course, important from the first. The whole southeastern part of the state is composed of a rich limestone clay, largely glacial in origin. The southwestern portion of the state is also clay, residual in origin, but covered in the western part with loess. The Green Bay-Lake Winnebago region is also composed of clay of a high order of fertility, though requiring artificial drainage. The central portion of the state is composed of a variety of soils, chiefly sandy and sandy loams, not so durable as the clays nor so well adapted to wheat, but still productive in their virgin condition. Stretching northward along the Mississippi River is a succession of sandy loam and clay soils, with the latter predominating. These soils also have been enriched by deposits of loess.¹

The second of the two factors referred to, is the generally non-forested nature of the southern and western portions of the state, which consisted for the most part of "oak openings" and prairie. This second influence was not without its effect previous to 1850, but was chiefly important during the following two decades. The prairies were not generally cultivated until shortly after 1850.² A comparison of the map³ showing the development of railroads during the first two decades after 1850,

¹ See the *General Map of the Soils of Wisconsin* in the *Twenty-second Ann. Rep. of the Agric. Exper. Station of the U. of Wis.*, for 1905, between pages 262 and 263.

² Hibbard, *Hist. of Agric. in Dams Co.*, p. 105 ff.

³ See Figure 9. [All numbered tables and figures are found in the Appendix.]

and of the charts⁴ representing the movement of the wheat area during the same period, with the map in the *Tenth Census of the United States*⁵ showing the distribution of the forest area in Wisconsin brings out a striking connection. The growing of wheat to an excessive degree in Wisconsin has been largely confined to this, in the main, non-forested area. In these counties, the lumber industry did not divide attention with wheat growing.⁶ There was no heavy nor tedious labor involved in clearing the land. There were few stumps to interfere with the use of machinery. The land could thus be brought under cultivation with very great facility, and we are quite prepared to understand the extraordinary rapidity of settlement, and spread of population that occurred a little later under the combined stimulus of railroad construction and the rise in the price of wheat.

In the previous chapter, conditions as they were about 1850 have been described. These conditions continued in a general way until 1854, although the crop of 1853 was much better than those of the years just previous.⁷ The year 1854, however, brought a bounteous crop, while in the meantime there had occurred a marked rise in the price of wheat.⁸ Under the combined influence of these circumstances, together with the added impulse given by the construction of railroads, there ensued a period of the greatest prosperity.⁹ This was at first most marked

⁴ See Figures 1-3.

⁵ 9: 554-55. See also the map of the forest area in Wisconsin, in the front of the *Trans. of State Agric. Soc.*, 1860.

⁶ This is not strictly true with respect to the river counties.

⁷ Wheat in Fond du Lac and Grant counties yielded about 20 bushels per acre, while the yield in Waukesha county was from 20 to 40 bushels per acre. *Pat. Office Report Agriculture*, 1853, pp. 152-153.

⁸ See tables VIII-X. See also p. 36 above, and p. 46 below.

⁹ "Abundant harvests, which under Providence have burthened our fields in every portion of the state, have been made still more welcome from the increased market value over the products of former years." (*Trans. of State Agric. Soc.* 1854, '55, '56, '57, p. 17). "In quantity and quality, the products of our state have never been surpassed, while a ready sale, and high prices have awaited the farmer at his own door." (*Ibid.*, p. 72.) "Every department of business is found to be in a highly prosperous condition, owing mainly to the fact of good crops of all the principal varieties of grains and vegetables, together with good market prices for them. . . . Superadded to the whole, was the quickening spirit of railroad extension in various directions into the interior of the state. . . . All these various causes working together nat-

in the southern part, but rapidly spread to the remaining portions of the state. Mortgages were lifted and other debts discharged. Banks sprang up and currency flowed in. There was a boom in real estate, and land values soared upwards. All classes shared in the prosperity. Speculation set in and added to the ever quickening movement until confidence reigned supreme and the return of the old-time depression was scouted as an impossibility. In connection with this extraordinary activity, and, indeed, as an essential part of it, there occurred one of the most remarkable movements of population into a new region in the history of the United States. Immigration poured in. The land offices were thronged, and thousands of entries were

usually produced an extraordinary buoyant state of feeling among all classes. Large amounts of currency being necessary, new banks started up on all hands like mushrooms. . . . Probably a fifth was added to the breadth of the fields of the state during the year and not much if any less to the population. Many farmers invested their surplus gains in additional lands which as a general thing they did not need, already having more than they could farm properly. . . . But the constant upward tendency of lands in price marked them as a favorite investment for all who could avail themselves of the means to buy."

"The speculative spirit unsettled conditions and made them unstable . . . and this state of things naturally brought even a greater degree of instability than had previously existed, although instability and change are the characteristic faults of all new countries. Nearly everything in the way of real property came to be held for sale and when bought it was usually to sell again;

Thus, flush and good times, first felt in 1854, among our people, laid broader and deeper those feelings of speculation and unrest which had always existed though measurably dormant; and hence while the amount of active wealth in circulation, stimulated some few to solid, substantial and permanent improvement, irrespective of the idea of selling out, still much greater numbers, only aimed at adding acres to their already unimproved acres and sitting up, if at all, in a superficial, cheap and showy way like a jockey horse simply for sale" (*Ibid.*, p. 101 ff.)

"We said the farmers are enjoying the good time. All the industrial classes are enjoying the same good. The fulfillment of that modest prediction (predicted by the late President of the Society, Hon. J. T. Willard in 1853) 's being realized most gloriously. Fortune and plenty is vouchsafed to them all, stacks of grain crowning the ample fields of every farmer, granaries filled to overflowing, money plenty, old mortgages drawing from 12 per cent to 50 per cent interest, cancelled and discharged of record—surplus funds deposited with gentlemanly bankers of our own county, in banks that never dream of failing—some small change in the old wallet,—old store debts paid up and receipted, and the cash system triumphant. . . . Our future is full of hope and rich with promise. The good time we have said has already come"

—Annual Address before the Rock County Agric. Soc. and Mechanics' Institute, Janesville, September 27, 1855, by Colonel Z. P. Burdick, in *Trans. of State Agric. Soc.*, 1854, '55, '56, '57, pp. 151-60.

made. The construction of railroads went on with new activity, and farmers vied with the residents of villages, towns and cities in lending their financial aid. In 1851 the Milwaukee and Waukesha railroad was finished to Eagle Center. In 1852 it was extended to Milton Junction and Janesville. The next year it reached Stoughton and on May 24, 1854, was opened to Madison. The Chicago and Galena Union reached Beloit in 1853. In 1854 the Rock River Valley Union railroad was constructed from Fond du Lac to Minnesota Junction. This latter road became the Chicago, St. Paul and Fond du Lac and built a line from Cary, Illinois, to Janesville in 1855, and completed the gap between Janesville and Minnesota Junction in 1859. The Milwaukee and Mississippi (Mil. and Waukesha) completed its southern branch to Monroe in 1857 and reached the Mississippi River at Prairie du Chien in the same year. The Racine, Janesville and Mississippi railroad completed a road in 1855 and 1856 from Racine to Beloit.

Meanwhile there was the greatest activity in railroad construction northwest of Milwaukee. The Milwaukee and Watertown was completed to the latter place in 1855, to Columbus in 1857 and to Sun Prairie in 1859. The Milwaukee and Horicon reached Horicon in 1855 and the northern branch was completed to Berlin in 1857. The southern branch under the name of the La Crosse and Milwaukee was opened to within a short distance of Portage in 1856, reached New Lisbon in 1857 and La Crosse the next year. There were besides some other less important lines. Such was the rapidity with which railroads were built that the secretary of the Milwaukee Chamber of Commerce could claim by 1858 that within the past two years that city had become one of the principal railway centers in the West.¹⁰

Already in 1853 immigration had greatly increased. The total number of immigrants in that year was estimated at from 15,000 to 30,000, which exceeded that of the three years immediately preceding.¹¹ In 1854, 15,000 Norwegians and Swedes came to

¹⁰ Report, 1858.

¹¹ Report of the Emigration [sic] Commissioner for 1853. Perhaps much of this increase was due to the establishment of the Board. According to other estimates the number was from 40,000 to 80,000. See Report of Travelling Emigrant Agent for 1853.

Wisconsin.¹² During three months of the early fall of 1855 more than 10,000 persons with their teams, stock, etc., were said to have crossed the Wisconsin River near Portage in search of lands.¹³ In 1856 over 10,000 immigrants arrived in New York alone on their way to settle in Wisconsin,¹⁴ while in 1857 over 1,000 Norwegians arrived during the month of May and 20,000 more were expected from the same country during that year. The German and Irish immigration was also in excess of former years.¹⁵ There was also much moving of the population already settled in Wisconsin. As the price of land rose many took advantage of the opportunity to sell out at a profit and went farther on to the frontier to take up new farms.¹⁶ There was an exodus of the early Norwegian settlers from Dane county and their places were filled by "enterprising eastern people generally more wealthy than those who have gone to make room for them."¹⁷ This occurred at the very time when the prairie tract in the northern part of the county was being rapidly settled.

The rush for land was unparalleled. At the La Crosse land agency¹⁸ the entries were not numerous until the latter part of 1853. In 1854, however, the entries increased so as to become epidemic. From 1853 to June, 1856, the total warrant and other entries in this section amounted to 2,500,614 acres, involving an outlay of \$3,098,317, exclusive of preemptions.¹⁹ The rush for land at the opening of the land office at Stevens Point in 1852 was "unprecedented."²⁰ By 1856 almost one-half of the land in the district had been sold. From July 5, 1853, to March 31, 1857, sales at this office aggregated 1,435,560 acres. Not one-twentieth of this was entered for lumbering, but by 1857 two-thirds of it was occupied by settlers who were opening farms.²¹

¹² Tuttle, *History of Wisconsin*, 1875, p. 297.

¹³ *History of Columbia County* (West. Hist. Co., 1880), p. 590.

¹⁴ Ritchie, *Wisconsin and Its Resources*, 1857, p. 26.

¹⁵ *Ibid.*, 173.

¹⁶ See *Report of the Register at the State Land Office at Oshkosh for 1852*.

¹⁷ *Madison Argus and Democrat*, June 24, 1854.

¹⁸ Opened June 1, 1853. Carr, *Sketch of La Crosse*, 1854, p. 16.

¹⁹ *History of La Crosse County* (West. Hist. Co., 1881), 403-4.

²⁰ Billis, *History of Portage County*, 1876, p. 10.

²¹ *Governor's Message and Accompanying Documents*, 1857, 2: 436, 446.

Additional land offices were opened in 1857 at Hudson and at Superior.²² As the unoccupied lands in the older parts of the country were first taken up, later immigrants passed into the valleys of the Fox and Wisconsin rivers on the east and spread up along the Mississippi river on the west.²³ Besides the federal land which was for sale at a minimum of \$2.50 within six miles of railroads and at a minimum of \$1.25 per acre for all other lands, there were put on sale the school lands of the state, the swamp lands and the various lands granted to the state on behalf of certain internal improvements, notably those granted for the improvement of the Fox and Wisconsin rivers.²⁴ These latter lands were to be sold at not less than \$2.50 per acre;²⁵ a large part was actually disposed of at that figure in return for labor. Much of this land was located in the neighborhood of the rivers for whose improvement they were granted and their occupation was hastened by the construction of railroads in that vicinity.²⁶ The population of the congressional district in which these lands were chiefly located was said to have increased from 116,000 in 1850 to 300,000 in 1856.²⁷ Even the pine lands responded to the upward movement in prices. At a public sale of those lands, at Menasha in 1855, several tracts were sold as high as \$24.25 per acre, while the average price was \$8.00 per acre.²⁸ According to Ritchie,²⁹ the amount of land in cultivation within the state in 1857 was double that of 1850, while he as-

²² Ritchie, *Wis. and Its Resources*, 167.

²³ *Ibid.*, 26.

²⁴ See Hibbard, *Hist. of Agric. in Dane Co.*, 91-104.

²⁵ See Tuttle, *Hist. of Wis.*, 1875, p. 274. Also see Special Message of Governor Farwell on Fox and Wisconsin Improvement, Feb. 9, 1858. Also message of Governor Barstow in 1855 in reference to the sale of school, swamp and overflowed lands.

²⁶ See *Report of Directors of Fox and Wisconsin Improvement Co.*, 1859. For Sketch of Fox and Wisconsin River Improvement see *Wis. His. Soc. Col.*, 11: 409-15; *ibid.*, *Proceedings*, 1899, pp. 186-94; also *History of Columbia County*, pp. 448-53, (West. Hist. Co.) 1880; also *Wisconsin Legislative Manual* for 1870; also *Report of Committee on Naval Affairs*, H. of R. No. 55, 37th Congress, 3d session, 1863.

²⁷ *Rep. of Directors of Fox and Wis. Imp. Co.*, 1859.

²⁸ *Menasha Advocate*, quoted in *Wis. Farmer* 7: 346.

²⁹ *Resources of Wisconsin*, pp. 47, 111. The statement as to the increase in the population of Dane county is probably an exaggeration. The estimates as to the increase of improved land are within the truth.

sented that but one-sixth of the land in Dane county was yet settled, notwithstanding the fact that the population of that county had trebled since 1850. The population of Fond du Lac county doubled between 1850 and 1854.³⁰ Milwaukee increased in population from 20,000 in 1850 to 32,000 in 1855 and to 46,000 in 1860. Madison increased in population from 5,126 to 8,664 during the year 1854-1855;³¹ Janesville from 5,000 in 1853 to 10,000 in 1857, and La Crosse from 300 in 1853 to 12,000 in 1857.

During the decade 1840 to 1850 the increase in population in the whole state had amounted to 274,446, or 886.9 per cent. During the following decade, the numerical increase was the greatest in the entire history of the state, being 470,490 souls, an increase of 154.1 per cent. The increase in improved land for the decade 1850 to 1860 was, however, even greater, amounting to 258.3 per cent. Comparison of the increase of population and the increase in improved land reveals the extensive character of the settlement during the decade.³²

The effect of this large immigration and increase of population upon the prosperity of the state was at first very great, and added its influence to the other favorable circumstances.³³ The result was that in addition to the legitimate increase in the value of land there was an added increment that represented mere speculative value.³⁴ Men bought land to merely sell again at an advance. Sales as well as entries were enormous.³⁵ Towns

³⁰ Mitchel, Martin, *Hist. of Fond du Lac County*, 1854, p. 24. Probably an exaggeration.

³¹ *Hist. of Dane County*, (West. Hist. Co., 1880), 728.

³² *Seventh and Eighth Census*. Comparison of the charts representing the movement of the wheat area from 1849 to 1859 with the tables in the *Statistical Atlas of the Twelfth Census*, showing the density of population in Wisconsin at those periods, reveals to what an extent this spread of population was a function of wheat growing.

³³ See *Report of Emigration Commissioner for 1853*.

³⁴ During the latter part of 1857, after the panic, the editor of the *Wis. Farmer* (9: 411-12) in speaking of the probability of falling prices for labor, farm stock, manufactures and merchandise, expressed the conviction that the price of lands would follow suit. "especially speculative, unproductive lands," which included about three-fourths of all the lands in the state.

³⁵ See Hibbard, p. 195 for table of land sales in Dane county. The sales for 1855 are seen to have been more than twice as great as for any other year for which figures are given. The average price, \$9.68 per acre, is really quite high when it is remembered that there was much land just being taken up at that time in the county, and that in order to attain so high an average con-

were laid out on paper and boomed and men sat down to wait until the sale of town lots at an increased price should bring them a fortune.

All of this activity spelled ultimately "wheat." Man and nature seemed to combine for a few years to make wheat growing attractive to the Wisconsin farmer. More than three-fourths of the tonnage and revenue derived by the railroads for export traffic was due to the carriage of wheat.³⁵ In return for the golden stream of wheat was received a golden stream of money.³⁷ Those who had settled down permanently on their land devoted it largely to wheat because it was profitable.³⁸ Those who were merely holding for a rise sowed to wheat for the same reason and further because cropping to wheat involved no outlay of capital for permanent improvements. "Abundant crops and unexampled prices" is the way in which the year 1855 was characterized in the *Transactions of the State Agricultural Society*.³⁹ Examples of unusual yields of wheat were given⁴⁰ and the Report, in general, reflects the reaction in favor of raising wheat, but little being said of the "necessity of crop rotation."

siderable land must have been sold at much higher figures. See *ibid.*, p. 196. Gregory states that secondhand land could be obtained at prices varying from \$3 to \$30 per acre, according to improvements made and the distance from market. These prices did not apply to the immediate vicinity of cities.—*Industrial Resources of Wisconsin*, 1853, p. 310.

³⁵ See below pp. 156-7.

³⁷ The crop of 1855 was estimated in the *Wis. Farmer* at 12,000,000 bushels, of which 8,000,000 bushels would probably go to foreign buyers for \$10,000,000. Improved farm machinery had made this possible. S: 43.

³⁸ "Prices for the years preceding the current one (1855) ending Aug. 31."

Year	Wheat	Flour
1848	\$0.83	\$4.50
1849	.80	4.25
1850	.88	4.75
1851	.70	3.85
1852	.60	3.1'
1853	.70	4.0
1854	1.30	6.7

"Prices must drop from 20 per cent to 30 per cent within 60 days. . . . Farmers may prepare to sell the new crop at \$1.00 to \$1.25. They cannot be in better business in this state certainly than raising wheat at those prices."—*Wis. Farmer*, 7: 234-235. This amounted to a warning with a string attached.

"Two good seasons have made Wisconsin smile like a young Eden."—*Prairie Farmer*, 14: 133.

³⁹ Report for 1854, '55, '56, '57, p. 113.

⁴⁰ One man in Dane county harvested 45 bushels per acre on two acres. *Ibid.*, 114.

An increased acreage was sown to wheat in 1856 so that in spite of drouth which poor preparation and cultivation of the soil made the more disastrous, the largest crop in the history of the state up to that time was raised.⁴¹ The wheat produced within the counties drained by the Milwaukee and Mississippi railroad exceeded in 1856 the amount produced in 1855 by 50 per cent.⁴² The price of wheat showed a downward tendency, falling as low as 80 cents at the close of navigation in 1856.⁴³ Nevertheless an increased acreage was again sowed, though at a greatly increased cost,⁴⁴ and, the season proving favorable, a large crop resulted.⁴⁵ An attempt to market the surplus in the fall of 1857 under the circumstances of the panic then in full sway resulted in a great drop in the price, wheat selling in Milwaukee at the beginning of 1858 at 55 to 60 cents per bushel.⁴⁶ Shipments were then held back in the hope of better prices, but the farmers of Wisconsin, on account of their previous speculative operations and on account of general conditions, were not in a situation to hold their wheat from market any considerable length of time, and the price recovering somewhat as it became evident that the crop of 1858 would not be an average one,⁴⁷

⁴¹ "The staple of Wisconsin is wheat. . . . So high has Wisconsin spring wheat stood at the eastern and European markets that our merchants have been able to sell for 8 or 10 cents above the prices for Illinois and more southern states. This fact turned the attention of our farmers to raising it to the exclusion of other grains; and while our crop of wheat since 1850 has increased at the ratio of 50 per cent per annum, the crops of rye, oats, barley and corn have remained stationary or advanced only with the home demand." *Rep. of Milwaukee Board of Trade for 1856*, p. 12. (Rather an extreme statement as to wheat if taken literally.)

⁴² Report for 1856. It is impossible to secure full and reliable statistics of the production of wheat in Wisconsin during the decade 1850-1860. No provision was made by the state before 1857 to secure such data. The returns secured for that year and for the year previous were very partial and incomplete (See *Rep. of Secretary of State, 1857*, pp. 93-94). For the year 1858 the returns are more complete. It may be said that the statistics gathered by the state in reference to farm crops are in general untrustworthy, even up to the present time.

⁴³ *Rep. of Milwaukee Board of Trade for 1856, supra.*

⁴⁴ *Ibid.*, for 1858.

⁴⁵ *Ibid.*, estimated at 14,000,000 bushels by *Wis. Farmer*, 10: 51.

⁴⁶ See Table VIII.

⁴⁷ "The wheat crop of 1858 is generally considered one-third less than 1857." —*Rep. of Milwaukee Chamber of Commerce for 1858*. See also *Wis. Farmer*, 1858, p. 332.

receipts poured in again and kept the price at a low point. Receipts at Milwaukee for 1858 amounted to nearly five million bushels, and those of the other lake ports were above a million bushels.⁴⁸ Notwithstanding the short crop of 1858 and the low price, there seemed nothing else to do but to raise wheat and a further increased acreage resulted.⁴⁹ If farmers were hard pressed financially, that was a good reason for not going into something which required a greater outlay of capital than raising wheat.⁵⁰ If the price of wheat was low, there remained the memory of the high prices and good times of a short time before, and hope bade them believe that the same prosperity might come again. They were not without warning, however. Low prices and short crops had again stirred up the feeling that it was unwise to depend so exclusively on wheat. "Facts should admonish farmers not to rely too implicitly upon the wheat crop."⁵¹ Again, "Our farmers would be wise to so diversify their operations as not to run entirely into one thing and that wheat."⁵² In regard to an exhortation to farmers to grow more wool, the *Wisconsin Farmer* continued, "So may it yet be, ere our lands are exhausted with eternal wheat growing and farmers discouraged because they cannot get rich merely doing one and that too often a foolish thing."⁵³ The reports of the Agricultural Society, too, assume a slightly more doubtful tone and in the report for 1856 there was complaint of methods of

⁴⁸ *Rep. of Chamber of Com. for 1858.*

⁴⁹ "While speculative property has been greatly reduced in value, the productive industry of the state of Wisconsin has greatly increased. Many have left cities and villages and instead of depending upon the rise in value of town lots have turned their attention to agricultural pursuits and the number of acres sown to wheat much exceeds that of former years."—*Report of Directors of Fox and Wisconsin Improvement Co., 1859.*

⁵⁰ Wool growing was declining during this time, caused, according to some, by destruction by dogs. (*Wis. Farmer*, 10: 362.) This merely meant that there were more people interested in dogs than in sheep.

⁵¹ *Wis. Farmer*, 10: 475.

⁵² *Ibid.*, 11: 71.

⁵³ *Ibid.*, 396. "Less land and better culture." . . . "It must cease to be the policy of our farmers to grasp all the land they can pay and run into debt for, scrape it over until they have exhausted it of its fertility, etc." —*Ibid.*, 111.—"How many intend to grow nothing but wheat?"

"We are anxious to know whether the wheat mania has subsided, or whether the recent fair prices have not had the effect to seriously aggravate the disease." —*Ibid.*, 115.

cultivation.⁵⁴ The crop of 1859 was also not up to the standard of the crop of 1857,⁵⁵ but the increased acreage resulted in an increased total yield for the state.⁵⁶

But little is heard of other crops. They continued to be grown by a few, but there was little further tendency toward making them relatively more important. The potato crop was said to be growing to be one of precarious cultivation on account of the rot. Reports on attempts at raising flax were not very encouraging. There was complaint of lack of barns for dairying and also of a lack of green feed.⁵⁷ Of course all this spells indifference to other crops.

During the decade 1849 to 1859 the wheat crop of the United States as a whole increased from 100,485,944 bushels to 173,104,924 bushels.⁵⁸ During the same time, the crop of Wisconsin increased from 4,286,131 bushels to 15,657,458 bushels, or an increase of 11,371,327 bushels. The increase in Wisconsin was thus 15.6 per cent. of the total increase for the United States as a whole.⁵⁹

A comparison of the charts⁶⁰ representing the wheat areas for 1849 and 1859 reveals the great development during the decade. Whereas in 1849 but a trifling amount of wheat had been raised north of the Wisconsin river, by 1859 a number of the counties in the western part of the state had sprung into importance. There had likewise been greatly increased importance in wheat growing in every other part of the state except in the extreme southeastern portion. This increase was particularly marked in the south central part of the state. Rock county which ranked first in importance in 1849 showed, apparently, a remarkable

⁵⁴ *Trans. of State Agric. Soc.*, 1854, '55, '56, '57, p. 257; also p. 486. Also *ibid.*, 1858-59, p. 74.

⁵⁵ This must be kept in mind when using the year 1859 as a standard.

⁵⁶ The yield given in the census of 1860 for the year 1859 was 15,657,458 bushels.

⁵⁷ *Trans. of State Agric. Soc.*, 1851, p. 197; 1853, pp. 51-3, 238, 255 ff; 1870, pp. 28-9.

⁵⁸ See Table VI.

⁵⁹ If we calculate to 1860 when Wisconsin produced perhaps the most remarkable crop of wheat ever produced in the state, the proportion of the total increase to be attributed to Wisconsin is over 30 per cent. The crop of 1860 was, however, exceptional.

⁶⁰ See Figures 1 and 2.

stability during the decade since in 1859 both the yield per capita,⁶¹ the yield per square mile of improved land⁶² and consequently, the index of importance or degree of specialization⁶³ remained almost exactly the same as in 1849. In live stock and in the production of hay the same stability obtained, and almost the same stability in reference to "other crops."⁶⁴ It appears that the influences favoring wheat growing in this county during the decade were on the whole just about counteracted by the operation of opposing influences so as to leave conditions about unchanged. It is clear, however, from what we have already seen that there had been a great tendency toward wheat growing in Rock county about the middle of the decade,⁶⁵ followed by a decline in the latter part of the decade, and that stability was the net result. Relatively, however, Rock county as well as

⁶¹ See Table I, showing the per capita yield of the different counties at the different census periods.

⁶² See Table II, showing the yield per square mile of improved land for each county at the different census periods.

⁶³ See Table III, indicating the degree of specialization or importance of each county in wheat at the different census periods. This index of importance is obtained by extracting the square root of the product obtained by multiplying the number representing the yield of wheat per capita in each county by the number representing the yield of wheat per square mile of improved land in the same county. In this way importance is given to both yield per capita and yield per square mile of improved land in estimating the actual importance of any county in the production of wheat. (See *Ninth Census of the United States*. 3: 367-68.) If dependence were placed upon the per capita yield alone, the existence of a large city within a county would for example unduly depress the importance of that county. This can be corrected in part by making the yield as estimated according to the amount of improved land in the county a factor in the result. On the other hand the yield per capita exercises a modifying influence on the yield per square mile of improved land. The yield per square mile of improved land rather than the yield per square mile of total area is chosen as a factor in the result, as being more significant and more accurate.

The yield per square mile of improved land is not worked out for crops other than wheat: but when it is necessary to take both factors into consideration in respect to other crops it should be noticed that a proportional relation exists between the yield of wheat per capita and the yield of wheat per square mile of improved land on the one hand and the yield of any other crop per capita and the yield of that crop per square mile of improved land on the other hand. That is, for any county the yield of wheat per capita is to the yield of wheat per square mile of improved land as the yield per capita in any other particular crop is to the yield per square mile in that crop. Three terms of the proportion are thus given and the fourth term, i. e., the yield per square mile for any other particular crop, can easily be found.

⁶⁴ See Tables XI-XXI.

⁶⁵ See above pp. 40-1, note 9.

Walworth and Kenosha counties, had declined in rank. Rock declined from first to fifth place, Walworth from second to eighth place and Kenosha from third to seventeenth place. Racine county had declined from tenth place to thirty-second place. All of these counties, except Rock, show absolute decline, also, in the importance of the wheat crop. This decline was largely in yield per square mile of improved land and indicates in part that improved land had increased faster than population.⁶⁶ There was slight change in these counties also in respect to other crops. The tables for live stock,⁶⁷ however, show an important increase in that industry.⁶⁸ Kenosha showed a notable increase in the number of milch cows, an indication of the early movement toward dairying in that county. In these three counties, therefore, stock raising was increasing at the expense of other branches of agriculture, especially at the expense of wheat growing.

Marquette county showed an apparent decrease but this was due to the setting off of Green Lake county from that county during the decade, the effect of which was to deprive the former county of that part of the original county which was most important in wheat growing.⁶⁹ Green Lake county stood first in 1859 among

⁶⁶ This may be stated in another way by saying that improved harvesting machinery enabled a larger acreage to be sown to wheat per capita and therefore a larger per capita yield to be secured than would have otherwise been the case.

⁶⁷ See Tables XVII-XXI.

⁶⁸ The increase in total live stock appears larger than is really the case since the figures falling below a certain standard are omitted entirely and thus more were omitted in 1849 than in 1859.

⁶⁹ Chippewa presents a similar case, having lost to several counties newly formed. The parcelling out of this county during the following decades as well, makes comparisons for it at the various census periods difficult. Brown and Washington present somewhat similar cases. The statistics for Adams and Sauk counties are combined for 1849, though apparently representing Adams county alone. This fact makes comparisons difficult in those two counties for the census years 1849 and 1859. The various counties in the northern half of Wisconsin have since 1850 undergone numerous changes in reference to their respective boundaries. This makes comparisons between those counties difficult. Close study of these changes, however, proves that they constitute a disturbing element to a very much less extent than at first appears. The method of estimating by yield per capita and per square mile of improved land rather than by total acreage or by total yield avoids the essential difficulties of the situation. It will be found, too, that the changes pertain almost entirely to those counties which have been relatively unimportant in the growing of wheat.

the counties that had increased in importance in the growing of wheat. Marked increase was also shown by that county over Marquette county in 1849 in respect to other crops and in respect to live stock. It would thus appear that this county, notwithstanding the high yield in respect to wheat, was not so specialized in the culture of that crop as might at first appear, but was rather an extremely productive county in which there appeared at an early date very considerable diversity in agriculture.⁷⁰

Dane, Columbia, and Dodge counties, which are next in order of importance, may be grouped together. The tendency toward wheat was marked in each of these three counties. The first and last doubled and Columbia more than doubled, the amount of wheat produced per capita in 1859 as compared with 1849, while all three counties also increased greatly in yield per square mile of improved land.⁷¹ This was especially marked in Dodge county. Dane and Columbia counties increased considerably in the production of corn and oats,⁷² while Dodge showed little increase in that respect. Columbia showed a small increase in the number of milch cows per capita and a moderate increase in the number of "other cattle" per capita. Further than a marked decline in the number of swine per capita in all three counties, there was no noteworthy change. On the whole, we must conclude that the tendency toward wheat had been overwhelming during the decade and that the small increase in other crops and other pursuits was incidental and probably confined in a large measure to those older areas which in 1849 had already reached the point of exhaustion in wheat growing.

The northeastern group of counties showed a very considerable increase, in general, in the importance of the wheat crop. This was especially true in respect to Fond du Lac⁷³ and Kewaunee

⁷⁰ Reference to the figures for this county during the following decades serves to strengthen this presumption.

⁷¹ Probably due in part to greater fertility of the new land which had been brought into cultivation and in part to improved harvesting machinery.

⁷² These crops were apparently either grown for the market or as incidental to wheat growing. Note the decline in the number of swine.

⁷³ Fond du Lac county is comparable in many ways with Dane, Dodge, Columbia, and Green Lake counties.

counties. The latter county produced a considerable yield of rye and potatoes as well. Stock growing was unimportant. Fond du Lac county raised considerable oats, and had increased moderately in number of sheep, and in number of "other cattle."⁷⁴ In the remaining counties of this section the tendency toward wheat was more moderate. Rye, to a considerable extent, and barley, to a less extent, were competing crops. Stock growing was unimportant. This section represents, in general, the influence of the forests in retarding the tendency toward wheat.

Jefferson and Waukesha must be discussed separately. The former county doubled its population and more than quadrupled the amount of improved land during the decade. There was, however, considerable apparent loss of importance in wheat growing, and only a small per capita increase in other crops combined. It is thus evident that the loss was not due to farming to other crops. Neither does reference to the table for live stock show importance in that respect, though there was some increase in sheep and in "other cattle." The explanation probably lies in the great increase in "improved land," much of which was likely improved only in name. This seems the more probable because, while there was a large decline in the yield of wheat per square mile of improved land, there was a small increase in the yield per capita.⁷⁵ In Waukesha county there was considerable increase in importance in wheat growing, together with a noticeable increase in the number of sheep and a moderate increase in the number of milch cows. Both Jefferson and Waukesha counties are unlike the south central counties in that they never went to such extremes in wheat growing, and unlike the other southeastern counties, in that wheat continued to increase in importance for a time. In Waukesha county, the railroads probably had little influence upon conditions in agriculture on account of the fact that it had always had a market close at hand in Milwaukee. Milwaukee county presents a similar case.

⁷⁴ Increase per capita is always meant, not absolute increase.

⁷⁵ It is possible that the wheat crop in Jefferson county in 1859 suffered more from the drought than neighboring counties.

Though raising twice as many bushels of wheat in 1859 as in 1849, the relative importance of the crop remained unchanged.⁷⁶

The southwestern group of counties showed a marked increase in the importance of the wheat crop,⁷⁷ except in the case of Green county where the increase was only moderate. The absolute importance of wheat was less, however, than in the south-central group of counties. This is explained by the much greater importance of corn and oats in the southwestern counties. Reference to the tables for live stock shows why Green county failed to make such a large increase in wheat as the other counties. Stock growing had obtained a much better start there, while the character of the country is such as to especially encourage that industry. A very considerable increase in the number of milch cows indicated the coming importance of dairying. The most striking increase, however, was in the number of "other cattle," in which the other counties of the group shared. Horses also increased considerably. In the face of a general decline in the number of swine in the state as a whole, that branch of animal husbandry held its own in this section during the decade. The importance of the corn crop of course constitutes the explanation.

Buffalo, St. Croix, Pierce, La Crosse, Trempealeau, Vernon, Crawford, Pepin, and Polk form a group of counties along the Mississippi river. The first five attract attention at once by their comparatively high rank, and all of them by the fact that not one of them was important in wheat growing in 1849. All were unimportant in stock raising except for a considerable number of swine.⁷⁸ Although these counties were less important in the culture of wheat than the south-central group of counties, they produced about the same amount per capita of other crops. In this respect they are analagous to the southwestern group. Corn, oats and potatoes were the other crops raised besides wheat.

⁷⁶The city of Milwaukee constitutes a disturbing element in Milwaukee county, throughout the entire period.

⁷⁷Iowa and Lafayette quadrupled the per capita yield of wheat during the decade. Grant a little less than trebled the per capita yield during the same time. In general, the per capita yield of the other crops combined just about doubled. These counties were very little developed in 1849.

⁷⁸Amounting to 1.1 per capita in Buffalo county, if the census figures can be trusted. Trempealeau also showed a considerable number of "other cattle."

These counties represent a case where there had not been an outlet to a market for a sufficient length of time to enable wheat growing to take hold.⁷⁹

The remaining important counties lie in the central portion of the state and may be treated together. Eau Claire, the most important, ranks nineteenth in importance. Only Richland and Adams were of any importance in wheat growing in 1849, and these in but a small way. In general, it may be said that these interior counties represented the tendency toward wheat as modified by forest conditions and in part by lack of transportation facilities. The importance of wheat was relatively low in comparison with other crops,⁸⁰ the apparently rapid tendency toward wheat in some cases being due, as in Richland, to the very small absolute importance of that crop in 1849. Sauk county, so far as comparison is possible, shows similarity, as might be expected, to the other interior counties and to Green Lake, Dane, Columbia, and Dodge counties. Within this entire region stock raising was almost altogether lacking.

The increase in the per capita yield for the state as a whole was from 14.03 to 20.18 bushels, and the increase per square mile of improved land was from 2,624 to 2,675 bushels. The small increase in the yield per square mile of improved land means a low yield per acre and points in connection with the increased yield per capita, to heightened extensivity in the methods of cultivation. That the per capita yield of other crops combined increased less rapidly than wheat, although corn, oats and potatoes usually yield a higher number of bushels per acre than wheat, proves that the acreage did not increase in respect to these other crops at the expense of wheat.⁸¹ The small increase in the amount of hay⁸² produced together with the very

⁷⁹ Buffalo county had just begun to export wheat a short time before. Kesinger, *Hist. of Buffalo County*, 1887, p. 368 ff.

Polk and Pepin were comparatively unimportant as yet. It will be remembered that La Crosse had been reached by rail only in 1853, and Prairie du Chien in 1857.

⁸⁰ It must not be forgotten that wheat was nevertheless by far the most important single crop.

⁸¹ The per capita yield of wheat increased 43.8 per cent. while the per capita yield of other crops combined increased but 32.6 per cent.

⁸² The increase was from .90 tons per capita in 1849 to 1.10 tons per capita in 1859.

slight increase in the total number of live stock per capita⁸³ proves that a relatively small amount of the improved land was turned into meadows and pastures. Consequently it must have been devoted largely to wheat; and cheap land, dear labor and the utilization of improved harvesting machinery made it most profitable to cultivate a large acreage at a comparatively low yield per acre.

In some of the southeastern counties there was a tendency toward stock raising and away from wheat, but in the state as a whole there was an increased tendency to specialize in wheat. This tendency is probably concealed in part by the fact that the wheat crop for the census year was a little below an average crop.⁸⁴

⁸³ The increase for the decade was from 1.46 to 1.50 per capita, chiefly milch cows, "other cattle" and horses.

⁸⁴ See above p. 49. If we calculate the per capita yield for some of the more important counties for the crop of 1860, estimating the increase in the population to have been one-tenth of the total increase for the decade, and compare the figures with those for 1859, we get the following results:

Counties	1859	1860
Columbia	42.3	50.1
Dane	40.0	67.0
Dodge	34.1	53.1
Fond du Lac	36.1	50.2
Green	26.8	31.1
Green Lake	43.6	67.3
Jefferson	13.7	29.2
Kenosha	25.3	41.8
Lafayette	22.5	33.8
Marquette	5.2	21.3
Racine	14.5	43.5
Rock	37.9	59.2
Sauk	19.1	39.6
Walworth	30.5	63.5
Waukesha	21.7	46.3
Winnebago	18.9	32.1

CHAPTER II

THE DECADE 1860 to 1870

In the first year of this decade one of the largest, if not the largest, wheat crop in the history of the state was raised.¹ It was one of those years when every condition was favorable. The crops of 1856, 1858, and 1859 had in consequence of unfavorable seasons not been good. The net result was that available fertility had increased faster than it had been removed. Under the favorable conditions of 1860 the soil brought forth most bounteously.²

The price of wheat was moderately high in 1860 but broke so soon as the heavy crop of that year began to be put on the market.³ Inadequate facilities for transportation resulted in the western markets being clogged with wheat. In December, 1860, the price of wheat in Milwaukee went as low as 63 and 65 cents.⁴ These prices were far from remunerative⁵ and robbed the farmers of their anticipated large income from the crop.

The crop of 1861 was not so large as that of 1860, but the acreage was said to have been little, if any, short.⁶ The price con-

¹ See above, p. 56, note 84; see also Table IV.

² "The year 1860 was a golden year in the history of Wisconsin, with a yield of over 27,000,000 bushels of wheat." *Trans. of State Agric. Soc.*, 1861-68, p. 23 ff. See *ibid.*, 1860, p. 45. "The wheat crop in Sauk county is estimated at 24 bushels per acre, and the acreage at 50 per cent. more than last year. Should present prices continue, this year's wheat crop will put most of the farmers firmly on their feet, free them from debt and render them independent." The average the year before had been 12 bushels per acre in Sauk county. *Wis. Farmer*, 12: 297; 13: 33-5. See *ibid.*, pp. 254, 290, 295, 314, for unusual yields of wheat. See also *ibid.* 14: 1.

³ See Table VIII.

⁴ *Rep. of Milwaukee Chamber of Com.* for 1860, p. 21.

⁵ *Trans. of State Agric. Soc.*, 1861-68, p. 84. See, however, note 2 above. Enough of the crop of 1860 must have been sold at a price sufficiently remunerative to induce further sowing to wheat.

⁶ The estimate in *Rep. of Milwaukee Chamber of Com.* was 15,000,000 bushels.

tinued low but in spite of this there were 1,221,517 acres sown to wheat in 1862.⁷ Low prices and poor crops again brought out strictures on the exclusive reliance upon wheat: "The wheat crop, unfortunately the sole reliance of a large proportion of our farmers, has been in some parts a serious failure owing to bad management, unfavorableness of weather and deficiency of working force. In addition to the low price for grain, the farmer suffered from the high cost of what he had to buy."⁸ Two remedies were suggested: first, increased facilities of transportation from the lake eastward, and, second, certain material modifications of agricultural practice. Complaint was also made of the "large and unlimited proportion of the market-price of grain, charged for carrying it from the interior of the state to the lake shore" and the regulation of railroads was advocated.⁹

In 1863 there came a good crop and higher prices once more. The next year, however, on account of the drouth and the chinch bugs, the wheat crop was unusually deficient. The chinch bugs had been accumulating for several years, though their ravages had not heretofore been serious. The methods of cultivation followed by the farmers of Wisconsin encouraged the multiplication of the insects. Now they made almost a clean sweep in some parts of the state, and continued their depredations for a year or two, though to a diminished extent.¹⁰ The wheat crop of 1865 was a good average crop and of good quality and war prices ruled. The acreage had declined¹¹ after 1864 but in response

⁷ *Rep. of U. S. Dept. of Agric.*, which in 1862 for the first time undertook the gathering of statistics each year in reference to farm crops.

⁸ *Trans. of State Agric. Soc.*, 1861-68, pp. 99-100.

⁹ *Ibid.*—"Wheat growing doesn't pay. The experience of the past two years has probably brought over many converts to the doctrine that wheat growing is not to be relied upon exclusively as a source of prosperity among farmers. Still there are many who cling to it as the safest way to gain a livelihood, and are at the same time on the brink of poverty from this very cause; this is but a legitimate result, etc." Then follows a plea for diversified farming. *Wis. Farmer*, 15: 172. *Ibid.*, 14: 61, 74, 282-83.

¹⁰ See Hibbard, *Hist. of Agric. in Dane Co.*, p. 181. See *Bulletin of the U. S. Dept. of Agric., Divs. of Entomol.* No. 15, for history of the ravages of the chinch bug. See also *Second An. Rep. of State Entomologist of Illinois*, 143-144. Also *Report of U. S. Commissioner of Agric.*, 1887, p. 56 for later ravages in Wisconsin. See *Trans. of State Agric. Soc.*, 1876-77, p. 140 ff; *Ibid.*, 1861-68, p. 33. See *Wis. Farmer*, 17: 7.

¹¹ *Report of the U. S. Dept. of Agric. for 1865*, pp. 54, 59, 61. See Table IV.

to high prices, the loss was largely recovered in 1866, and, as the price of wheat continued to mount upward in 1867, there was a large increase in acreage in that year. After the decline in prices again in 1868, there was a corresponding decline in acreage. The crop of 1866 when almost ready to harvest suffered great loss from heavy rains,¹² though the total yield equalled the yield of 1865 on account of the increased acreage. The crops of 1867 and 1868 seem to have been medium to average crops, though the total yield was not what might have been expected from the large acreage. The quality of Wisconsin wheat had been deteriorating for several years,¹³ however, and after about 1868, quotations for No. 1 spring wheat disappear from the Milwaukee market. The farmer thus suffered another diminution of his profits on account of the lowering grade of his grain. The wheat crop in Wisconsin in 1869 was, like that of the remainder of the country, somewhat above the average. But falling prices again intervened to keep the wheat grower from reaping the rewards of a bounteous yield. There was a similar decline in the price of other grains which prevented turning to other crops. Facilities for transportation were inadequate, and freight rates remained high,¹⁴ though the movement toward lower prices was general as the premium on gold diminished. The farmers of Wisconsin participated in the general distress, and the situation there was aggravated by the failure of the hop crop and by the ruin consequent to the break-down of that industry.

The wheat farmer of Wisconsin was indeed in a bad way. He had staked his last dollar and his last acre on wheat. In this game of chance, good crops and high prices alternated with poor crops and low prices in such a way as to induce him to keep in the game and pay his forfeits in the hope of winning once again. Habit, too, kept him from turning to other means of livelihood. It was another such game of chance that attracted the attention

¹² One-third to one-half of the crop was destroyed according to the estimate of the Milwaukee Chamber of Commerce, but this appears to be an extravagant assertion.

¹³ *Rep. of Milwaukee Chamber of Com. for 1868*, p. 19.

¹⁴ See Chapter on Relations between the Wheat Farmer and the Common Carrier.

of the farmer for a brief period. As a result of a combination of circumstances including the ravages of the chinch bug, failure in the wheat crop and particularly the rise in the price of hops, the first real episode in the wheat period took its start.¹⁵ The cultivation of hops, which had been persisting in a small way for some years, now took a sudden bound and spread over portions of the state with great rapidity. In 1864, 358,583 pounds were produced, almost exclusively in Sauk county. In the following year the crop amounted to 829,377 pounds, Sauk again producing 63 per cent. of the entire crop.¹⁶ Under the stimulus of high price the industry continued to spread and increase up until 1868. In that year Sauk county had one acre of improved land out of every seven and one-half acres in hops. For a time the crop was an exceedingly profitable one though expenses of production were high. But it came the losing turn again. During 1868 the price of hops dropped as low as it had been high before and many of the participants, having lost all their winnings and having no capital to start in a new business, went back to the game of wheat again. Wheat quickly recovered its supremacy, which had indeed hardly been threatened considering the state as a whole. There was less disposition than ever to make new ventures and it is probable that the hop craze had more effect in discouraging the efforts toward diversification than it had toward substituting some other crop for wheat.¹⁷ The movement toward a better system was painfully slow and aroused far less popular enthusiasm than the agitation against railroads. There was much justice in the movement in favor of lower rates and more effective control of railroads by the state; but it must be acknowledged that for many of the difficulties of the farmer's situation, he was either to blame himself or else the blame attaches to general conditions. To a certain extent then the railroads were made the victim of undeserved hostility.

¹⁵ See Hibbard, 149-54 where so good an account of the hop craze is given for the entire state that it is superfluous to take it up here. See also *Trans. of State Agric. Soc.*, 1861-68, pp. 36-8.

¹⁶ Jefferson county produced 97,772 pounds and Winnebago county, 69,183 pounds. Thirteen counties produced over 4,000 pounds each and eighteen over 1,000 pounds each.—*Rep. Sec of State for 1865*.

¹⁷ *Trans. of State Agric. Soc.*, 1861-68, pp. 36, 299, 419-20; 1869, pp. 17-18; 1870, p. 28.

On account of the inadequacy and unreliability of the statistics,¹⁸ it is difficult to accurately determine the effect of the Civil War upon the wheat growing industry in Wisconsin. Further difficulty arises in isolating the results due to the war from those due to other causes, such as changes in the price of wheat and the depredations of the chinch bugs. According to the reports of the United States Department of Agriculture, the acreage increased from 1860 to 1863, remained about constant in 1864 and fell off very considerably in 1865 though still remaining at a higher figure in the latter year than in 1860.¹⁹ According to the figures furnished in the reports of the Secretary of State, however, the acreage in 1864 was slightly less than in 1860 while a large decline was reported for 1865.²⁰

The decline in acreage in 1865 can, however, be largely accounted for as a result of the ravages of the chinch bug during the preceding year, when the average yield for the whole state was reduced to 8.4 bushels per acre.²¹ It is probable, too, that the heavy decline in the price of wheat in the spring of 1865 had considerable effect in diminishing the acreage sowed to that crop in that year.²² It appears that the effect of the war upon the acreage cropped to wheat was in general manifested in a slower increase of the wheat area than would otherwise have been the case, though even this is doubtful in view of the higher prices and of the introduction of labor-saving machinery due to the war. The prevailing current opinion of the time was also to the effect that the war had little effect in diminishing the area sown to wheat.²³ Up to December 31, 1864, Wisconsin furnished 75,000

¹⁸ See *Trans. of State Agric. Soc.*, 1861-68, pp. 26-30.

¹⁹ See Table IV.

²⁰ *Ibid.*

²¹ See Table V.

²² See Table VII.

²³ In the *General Report* (1868) accompanying the *Trans. of State Agric. Soc.*, 1861-1868, p. 25, it is said that the women and children, led by the patriots who were either unable or were not needed to wield the weapons of war, had "carried forward the arts of peace with undiminished results;" see also *ibid.*, p. 84 (Report for 1861). See *Ibid.*, 1887, p. 39. See, however, *Ibid.*, 1861-68, p. 100 (Report for 1862) where a serious failure in the wheat crop in some parts of the state was attributed in part to a partial deficiency of the working force by reason of the large numbers of farmers who had enlisted in the ranks of war.

men for the federal service,²⁴ and by the end of the war this number had increased to 91,379 men or one man for every nine of the inhabitants of the state.²⁵ The withdrawal of so large a proportion of the working force of the state without serious detriment to industry was due in part to the remoteness of Wisconsin from the scene of conflict, but most of all to the extraordinary introduction of labor-saving machinery in response to the higher prices for wheat and the scarcity of labor. Even by 1860 the use of improved farm machinery had increased greatly and it was estimated in that year that the farmers of the state would expend not less than \$2,000,000 in the purchase of implements and machinery alone.²⁶ Upon the breaking out of the war, however, the movement was greatly accelerated²⁷ and latent ingenuity was awakened to bring forth numerous inventions, while capital was soon diverted for the manufacture of the improved machinery now made more necessary than ever.²⁸ In 1862 an "unprecedented quantity of reapers and mowers" were sold within the state,²⁹ and the movement gathered impetus with the progress of the war. Numberless improvements in implements and machinery were exhibited at the state fair in 1864 and in the following years.³⁰ Reapers that did satisfactory work were constructed by a man named Warner of Prairie du Sac, and by E. W. Skinner of Madison, and John F. Appleby of Mazomanie was led to turn his attention, while performing the duties of a soldier, to the problem of evolving a self-binding attachment for the harvester, until he finally succeeded in perfecting the famous binding attachment which bears his name.³¹ The ingenuity of the mechanic and of the inventor in the north-

²⁴ *Quart. Jour. Econom.*, 20: 276.

²⁵ *Wisconsin State Census Report*, 1895. Part III., p. vi.

²⁶ *Wis. Farmer*, 12: 293-95. Regret was expressed that fully seven-eighths of this expenditure would be made outside of the state, including from 600 to 1,000 threshing machines at \$400 to \$475 each from Ohio and New York, and from 5,000 to 10,000 reapers from various points without the state.

²⁷ *Trans. of State Agric. Soc.*, 1861-68, p. 84 (Rep. for 1861).

²⁸ See Hibbard, *Hist. of Agric. in Dane Co.*, p. 131 ff. Also *Wis. Farmer*, 12: 196.

²⁹ *Wis. Farmer*, 14: 282-83.

³⁰ *Trans. of State Agric. Soc.*, 1861-68, pp. 199, 220, 221, 257, 258, 268, 323-24.

³¹ Hibbard, *supra*.

ern workshop in the creation of labor-saving machinery for the farm doubtless had as much to do with the successful issue of the war as the valor of the soldier in the northern army.³² The introduction of improved machinery in the state did not, however, cease with the war. An automatic wire grain binder, perfected by S. D. Carpenter of Madison, received special notice at the exhibition of the State Agricultural Society in 1867, as dispensing with the services of five field hands and having numerous useful attachments.³³ George Esterly, the inventor of the Esterly "header"³⁴ had directed his ingenuity toward the perfection of the Esterly Seeder and Cultivator, of which he manufactured in 1868 not less than 5,000 valued at \$400,000. During the same year, the J. I. Case Company at Racine was marketing threshers, horsepowers, truck wagons, straw stackers and other implements, to the value of \$1,000,000 annually in all parts of the United States. Reapers and mowers were extensively manufactured at Beloit, Janesville, Madison, and Whitewater, while various other farm implements were manufactured at the latter place as well as at Berlin and Horicon.³⁵ The unfortunate aspect of all this activity in the introduction of improved farm machinery was that it stimulated the extensive cultivation of the soil so that efforts for a thorough and systematic management were relaxed and, in many portions of the state, exclusive cropping to wheat with its ruinous results went on more assiduously than ever.³⁶

Examination of the chart representing the wheat area in 1869 reveals how the wheat crop continued to envelop the state.³⁷ Toward the northeast and in the western part of the state, wheat had extended its sway and increased its hold. In the south-central part of the state, too, the close of the decade found

³² See *Trans. of State Agric. Soc.*, 1861-68, p. 38; 1887, p. 39. Also article in the *Quart. Jour. Econ.*, 20: 258-78, on *The agricultural development of the West during the civil war*, by Emerson D. Fite.

³³ *Trans. of State Agric. Soc.*, 1861-68, p. 324.

³⁴ See above, p. 32, note 73.

³⁵ *Trans. of State Agric. Soc.*, 1861-68, pp. 53, 54.

³⁶ *Ibid.*, pp. 38-40. See also, Kessinger, L., *Hist. of Buffalo County* (1887) p. 372. See below Part II, Chapter IX, note 12.

³⁷ See Figure 3.

wheat apparently more completely dominant than in 1859. Only in the southern part of the state had wheat begun to yield its sway.

The river counties, St. Croix, Buffalo, and Trempealeau, now held first, second and third place, respectively, in importance, having displaced the south-central group. The other river counties, Pierce, La Crosse, Vernon, Pepin, and Crawford, had also increased greatly in importance, though still outranked by the south-central counties, and by others of the forested region. St. Croix, Buffalo, Vernon, Pepin and Crawford showed a considerable increase in the per capita yield of "other crops" combined but not comparable to the increase in wheat. Trempealeau, Pierce, and La Crosse on the other hand showed actual losses in the per capita yield of "other crops" taken as a whole. This section illustrates during the decade the extremest tendency toward specialization in wheat in the history of the industry within the state.³⁷ St. Croix, Buffalo and Trempealeau counties showed a per-capita yield of 74.6, 51.0 and 48.1 bushels respectively. In yield per square mile of improved land, the four river counties, Buffalo, St. Croix, Trempealeau, and Pierce stood at the head with 6,131, 5,072, 4,869 and 4,790 bushels respectively. The yield per square mile in these counties is more significant as there was a considerable population engaged in lumbering, thus adding to the total population without adding to the amount of improved land, and consequently to the amount of wheat raised.

Oats constituted the largest item in "other crops" in this section, but showed important gain only in St. Croix and Buffalo counties. Potatoes showed a marked decline since 1859. On the whole, little tendency toward stock growing was apparent. St. Croix county revealed a most marked absence of live stock, except in reference to horses.³⁸ All of the counties of this section, except St. Croix and Polk, reflected in a moderate way the general increase in sheep,—Vernon showing a little more and Trem-

³⁷ See above, p. 56, however, for table of per capita yields in 1860 in Green Lake, Dane, Walworth, and Rock counties. The year 1860, however, represents an unusual yield, rather than extreme specialization.

³⁸ Significant as reflecting the extreme specialization in the growing of grain, especially of wheat.

pealeau a little less than the average number per capita for the state as a whole. There was a decline in the number of swine, except in Crawford county. Buffalo and Trempealeau counties showed a rather important increase in the number of milch cows. Buffalo, Crawford, Pepin, and Vernon showed some increase in "other cattle," the increase being marked in the case of Buffalo. The dominance of grain farming in this section is reflected in that the number of horses was in general a little above the average for the state.³⁹

The south-central group of counties consisting of Dodge, Columbia, Dane, and Green Lake are next in importance. They had increased in absolute importance in wheat growing, but not to such an extent as some counties of the previous group, and had thus been displaced in rank. Dodge, however, retained fourth place. Columbia dropped from third to fifth place, and Dane⁴⁰ from second to sixth place. Green Lake had suffered the greatest relative decline of all, dropping from first to seventh place. In each case, these counties had increased more rapidly in the per capita yield of other crops combined than in that of wheat, but not to such an extent as to indicate that the acreage devoted to those crops had increased faster than the acreage devoted to wheat.

Green Lake county had made quite a small increase in per capita yield of wheat as well as of "other crops."⁴¹ The other counties showed an increase in per capita yield of wheat amounting to 20 per cent. to 40 per cent., and an increase in respect to other crops of 40 per cent. to 60 per cent. There was no net increase of milch cows in the section as a whole, though Dane and Dodge showed some increase in this respect. The number of swine had declined generally. The increase in the number of sheep was, however, marked, particularly in Columbia and Green Lake counties. There was a net loss in the number of "other cattle," while there was a marked increase in the number of

³⁹ In general, the increase in live stock in this section was only such as might be expected from the recent settlement of the country.

⁴⁰ Dane county suffered a reduced per capita yield partly on account of the growth of Madison.

⁴¹ It will be noticed that Green Lake county reached the maximum of wheat growing a little earlier than the other counties of the group.

horses.⁴² On the whole, little tendency toward a more diversified agriculture is apparent and even that was confined to the increase in "other crops"⁴³ and the increase in the number of sheep.

Iowa county should be grouped with the south-central counties in 1869. There was similar increase in wheat and in other crops. The increase in live stock was, however, much more important. The increase was considerable in milch cows, and marked in "other cattle" and in horses. Jefferson county showed considerable increase in the importance of wheat during the decade, and can, perhaps, be included with the other south-central counties; but there was a stronger tendency toward other crops, the per capita yield having doubled during the decade.⁴⁴ The movement in reference to stock growing was entirely comparable to that in the other south-central counties.

Waukesha county may be grouped with the southern counties, Rock, Walworth, Kenosha, Racine, Green, Lafayette, and Grant, as having declined both absolutely and relatively in the culture of wheat during the decade; but the decrease was slight in that county and in Grant county. The increase in the production of "other crops" was marked in this section, ranging from 50 per cent. to 100 per cent. Potatoes, corn and barley showed the largest increase. Oats replaced barley in the southwestern counties, in rapidity of increase. Except in Racine county, there was a marked increase in the total number of live stock per capita. The increase in the number of sheep was large, especially in Kenosha and Walworth and the other southeastern counties. Swine increased to a moderate extent, especially in the southwestern counties. Except in Racine county, there was a marked increase in the number of horses.⁴⁵ In the southwestern counties there was an

⁴² See Hibbard, *Hist. of Agric. in Dane Co.*, 130.

⁴³ This increase was largely confined to corn, potatoes and oats. The increase in potatoes is most significant. The increase in wheat and other crops together with the increase in live stock seems to contradict the statement of declining productiveness of the soil. In Dane county the tobacco crop was becoming important, 229,568 pounds being produced in 1869. See Table XXII.

⁴⁴ Particularly corn and potatoes. Jefferson county also produced 14,055 pounds of tobacco in 1869. See Table XXII.

⁴⁵ It does not seem probable that this increase in horses was entirely incidental to grain growing as appears to be the case in other sections.

important increase in "other cattle," in which Kenosha county also shared.⁴⁶ There was a general increase⁴⁷ in the number of milch cows, Kenosha, Lafayette, and Green being noteworthy in this respect. There appears to have been no general movement, however, toward dairying.

It is plain that in this section there was a strong movement away from the exclusive culture of wheat, but a movement which as yet had taken no special direction.⁴⁸ Nevertheless, wheat remained in general the most important single crop and wheat growing continued to be the most important single pursuit; and it must be acknowledged that where wheat continues to be raised to the extent of from 22 to 24 bushels per capita, there still exists considerable specialization in respect to that crop. The eastern counties, in general, showed a strong tendency toward increased importance in wheat growing. Fond du Lac, however, remained almost stationary in respect to wheat, as also in reference to "other crops." There was considerable increase in the number of sheep, but other live stock remained stationary. In fact, Fond du Lac county showed great stability in every respect during the decade. Winnebago county is entirely comparable in most respects to Fond du Lac county. Kewaunee county suffered a marked decline in wheat growing, as the total number of bushels of wheat raised in 1869 was less than in 1859, though population had doubled and improved land more than quadrupled. With the exception of these three counties, the eastern counties resemble the river counties. There was similar proportional increase in the cultivation of wheat and the same indifference to "other crops." The increase in the number of milch cows in Calumet, Ozaukee and Washington counties was comparable to that in Buffalo and Trempealeau counties. "Other cattle" and horses were less important in the eastern counties, while sheep were more numerous. The absolute importance of the wheat industry was much smaller in the eastern counties,

⁴⁶ Walworth county also increased to some extent in "other cattle".

⁴⁷ Racine must be again excepted.

⁴⁸ The tobacco crop was becoming important in Rock and Walworth counties. The former county produced 645,508 pounds in 1869 out of a total production of 960,813 pounds for the entire state. Walworth produced 46,136 pounds during the same year. (See table XXII).

though the tendency toward wheat was quite as strong. The land was being sowed to wheat, apparently, as fast as it was cleared.

We find a diversity of movement in the interior counties. Richland and Sauk showed a slight loss in wheat, probably due in part to the cultivation of hops, as "other crops" increased but slightly. There was considerable increase in the number of sheep in both counties and of "other cattle" in Richland county.⁴⁹ The same general stability appeared in the case of Waupaca and Waushara counties, and the increase in wheat was slight. Potatoes were comparatively unimportant as yet, while considerable rye was raised in Waushara county. The remaining interior counties showed considerable gain in wheat, the increase being most marked in Monroe and Jackson.⁵⁰ The moderate increase in "other crops" in the counties of this section consisted of an increase in oats in the northern counties, and of an increase in potatoes and rye in the southern counties of the group. Milch cows were unimportant except in Marquette county. Sheep had increased in number generally, but were especially numerous in Adams, Marquette, and Waushara counties. "Other cattle" were important in Adams and Marquette counties. On the whole, the tendency toward wheat was general and well defined, but was modified by the cultivation of other crops and by the live stock industry in some counties. Lumbering was an important industry at this time in this section and agriculture was slowly increasing in importance as compared with the non-forested region to the south.

To summarize, we may say that in general the eastern and the river counties were tending strongly to wheat,—the river counties being far more important in the culture of that crop, and near their maximum; while the eastern counties were less important but destined to increase in the future. In the south-central portion there was high specialization in wheat, but evidence of a change about to take place. The situation was somewhat simi-

⁴⁹ Swine were quite numerous in both counties.

⁵⁰ Other counties showed a greater proportional increase, *e. g.*, Marquette county. During the decade a railroad had been opened through Jackson and partly through Monroe and Eau Claire counties. (See Figure 9.)

lar in the central counties, though wheat was of far less absolute importance. In the southern counties the wheat industry maintained considerable importance, but had declined greatly. Stock raising, together with the growing of corn, barley and potatoes in the southeast, and of corn and oats in the southwest was taking the place of wheat. The most noticeable increase in stock growing in the state as a whole was in sheep and horses,—the number of sheep having increased from .40 to 1.00 per capita, and the number of horses having increased from .15 to .24 per capita. Taking the state as a whole, the increase in swine, milch cows and “other cattle” was slight. Dairying was thus of small importance as yet, except in a few counties to which reference has already been made.⁵¹

There was a comparatively small increase in oats in the state as a whole. The increase in the corn crop was more important. Potatoes increased from 4.9 bushels to 6.3 bushels per capita. Barley made a good gain, but was still quite unimportant. The per capita yield of “other crops” combined increased about 37 per cent. while wheat increased from 20.18 bushels to 24.28 bushels, an increase of 20 per cent. This would indicate that wheat came very nearly holding its own in the state as a whole, as compared with other crops.⁵² Improved land increased 57.5 per cent. during the decade. The acreage in wheat in 1859 was probably about 1,000,000 acres.⁵³ The estimated acreage for 1869 was 1,568,627 acres,⁵⁴ a considerable decline from the previous two years. This would give an increase in acreage amounting to about 57 per cent., thus indicating that wheat had declined little in importance and strengthening the conclusion derived from comparing the increase in per capita yield of wheat and the similar increase in respect to other crops. This conclusion seems also to agree with the position taken in the *Transac-*

⁵¹ The cultivation of flax was of some importance in Iowa and Kenosha counties. (Elighth Census). Pulse was an important crop in Manitowoc, Marathon, and Sheboygan counties. (*Ibid.*)

⁵² Equal increase in acreage planted to wheat and to “other crops” combined ought to produce double the increase of total yield in the latter case.

⁵³ The estimate for the year 1860 contained in the *Rep. of Milwaukee Chamber of Com.* for that year, was 1,062,097.

⁵⁴ *Rep. of U. S. Dep. of Agric.* for 1869, p. 30.

tions of the State Agricultural Society for 1868, that while the "old rule of wheat, wheat, wheat" seemed to be giving away at that time to a more rational practice, yet that during "all the past years since 1860" wheat had scarcely lost prestige with the farmers, who because of the scarcity of labor essential to the cultivation of all hoed crops, the increase of mechanical facilities for harvesting and a steady increase in price had cultivated it with even more than former zeal and energy.⁵⁵

⁵⁵ *Rep. for 1861-68* p. 33.

CHAPTER III

THE DECADE 1870 to 1880

The decade 1870-1880 opens with depression in the wheat industry in Wisconsin,¹ and with strained relations between the farmers and the railroads.² Between these two sets of circumstances there was a significant connection. Would the farmers be able to force such an increase in facilities of transportation and decrease in freight rates as would enable them to market their wheat with profit, or would they be compelled to substitute other farm pursuits, in which transportation played a minor part, in the place of wheat growing? Facilities of transportation increased greatly during the decade and rates declined, though not equitably.³ But these advantages were shared by the regions farther west⁴ and competition thus robbed the wheat grow-

¹ In an article by W. D. Hoard in *The Tenth Ann. Rep. of the Wis. Dairy-men's Assoc.*, p. 63 ff., the statement is made that the average yield of wheat had fallen off fully fifty per cent. from 1850 to 1870 (probably an exaggeration) on account of wasteful methods of agriculture; that the price, too, was fast lessening at the latter period, while habits of extravagance had been engendered by the war, and that there thus resulted a general awakening to the fact that an increasing rather than a declining revenue must be had on the farm.

See also *Farmers' Inst. Bulletin*, Wis. No. 2, p. 196. Also *Sparta Herald*, May 4, 11, and 18, 1869. See *Jefferson Banner*, Aug. 4, 1869; July 13 and Aug. 24, 1870. See *Historical Atlas of Wisconsin*, p. 161,—Snyder, Van Vechten and Co.: 1878. For a description of conditions in the various counties of the state at the beginning of this decade, see *Trans. of State Agric. Soc.*, 1870, p. 375 ff.

² See *Madison Democrat*, May 31, 1869; Aug. 18, 1869. *Trans. of State Agric. Soc.*, 1869, pp. 81, 82, 138 ff.

³ See below pp. 147-96.

⁴ See *Northwestern Miller*, Apr. 18, 1879 for an article on *The New Northwest*, where reference is made to the thousands and tens of thousands pouring into western Minnesota and eastern Dakota as a result of the extension of railroad facilities into those regions. See *Ibid.* Nov. 29, 1878. See *Trans. of State Agric. Soc.*, 1878-79, p. 213 ff.; 1881-82, p. 181; *Rep. of the Industrial Commission*, 10: 37, 86, 180, 188, 266, 366, 843, et al. (1900). See J. L. Coulter, *History of Agriculture in the Red River Valley* (in course of preparation as a doctor's thesis, University of Wisconsin).

ers of Wisconsin of the expected benefits. In the meantime the more enterprising farmers had turned their attention from wheat growing to other pursuits which promised according to their notion a larger and more certain revenue. Great but not insurmountable difficulties were encountered. Slowly but surely a new order of things began to prevail and by the close of the decade the agriculture of many portions of the state was transformed.⁵ It is thus within the decade 1870-1880 that wheat growing suffered its first serious decline in the state as a whole; and, no longer offering exceptional advantages, gave way to farm pursuits in which peculiar advantages were afforded on account of natural and social reasons.

The wheat crops of the years 1870 and 1871 were below the average on account of rust, drought and the ravages of insects. The crop of 1872 was, however, a full average crop, and that of the year 1873 was a bumper crop. Prices were fairly good, but advantage was taken of the heavy movement of traffic to push up the rates of freight, until the farmer complained that it cost him all his wheat was worth to get it to market. During 1874, 75 and 76, the chinch bugs again ravaged the wheat fields in the southern and central parts of the state. The northern and eastern parts of the state were exempt from the pest and there good crops were secured.⁶ The crop of 1877 was again a good one, of large yield and good quality, and on account of the war between Russia and Turkey, the foreign demand was good and prices were better than for several years. This was sufficient to encourage the wheat growers again and an increased acreage was sowed in 1878.⁷ Unfavorable weather conditions greatly injured the crop when near being matured, and as there was an immense crop in the United States as a whole,⁸ the price

⁵ See below pp. 80-1. See *Trans. of State Agric. Soc.*, 1875-76, p. 374 ff; 1877-78, p. 100 ff; 1888, p. 180. Also *Second Ann. Rep., Wis. Dairymen's Assoc.*, pp. 9-12. *Ibid.*, *Seventh Ann. Rep.*, p. 29. Also *Trans. Northern Wis. Agric. and Mechanics Assoc.*, 1880-81, pp. 68-70.

⁶ *Trans. of State Agric. Soc.*, 1874-75, pp. 23, 133-35; 1875-76, pp. 23, 328; 1876-77, pp. 140-44. See *Rep. of Milwaukee Chamber of Com.* for 1877.

⁷ See Table IV. See *Trans. of State Agric. Soc.*, 1876-77, p. 227 ff; 1877-78, pp. 41-2; 1878-79, p. 1.

⁸ See Table VI.

declined, so that the unfortunate wheat grower in Wisconsin lost, both coming and going. The crop of 1879 seems to have been a good average crop as far as total yield was concerned, but the yield per acre had been declining and the average for the state was low.⁹

The relation of the facts concerning the wheat crops of the decade is thus painfully similar to that of previous decades. There was the same alternation of short crops, average crops and bumper crops; the same story of drouth, of rust, of insect ravages. There were the same assertions of declining yield and the same statement of high yields. There was much condemnation of exclusive cropping to wheat and an occasional acknowledgment that it was still the staple of the state and likely to so continue so long as there was so much money in it. There was the same old complaint about the extortions of the railroads, though competition was so keen in 1879 that in some places wheat was carried for nothing.¹⁰

These apparently contradictory assertions are probably all true if said of a particular place at a particular time. Conditions varied so much in different parts of the state even during the same year that general statements can hardly be made with any degree of accuracy.

Inspection of the wheat chart for 1879 and comparison with that of 1869¹¹ show the partial withdrawal of the wheat industry from the central and southern portions of the state. The wheat area in Wisconsin had divided into two parts, which the rapid decline of the following two decades was to diminish and leave as remnants on the eastern and western borders. For the present, though, there had been further extension in the extreme northeast, and in the far northwest, and wheat had in-

⁹ See Table V.

¹⁰ *Hist. of Fond du Lac County* (West Hist. Co., 1880), p. 694. For failure in wheat culture see *Trans. of State Agric. Soc.*, 1871, p. 241; 1874-75, pp. 23, 141, 275; 1875-76, pp. 305, 343, 377; 1877-78, p. 101; 1878-79, p. 1. See also *Ibid.*, 1870, p. 11 ff. and 1872-73, p. 159. For view that wheat is the "great staple" and must so continue, see *Ibid.*, 1872-73, p. 388; 1873, crop summary; 1875-6, p. 336. For complaint of inadequate facilities of transportation and high freights, see *Ibid.*, 1872-73, p. 159; 1873-74, pp. 55, 93, 174, 196, 233, 297, 429-35; 1875-76, pp. 73, 377.

¹¹ See Figures 3 and 4.

creased in importance around Green Bay, and in Polk, Barron, and Burnett counties. By referring to Table III, it is seen that the numerical index of specialization is smaller than in 1869 in the case of every order of rank from the first to the last place. By reference to Table IV, however, it is seen that in the case of particular counties wheat was more important than in 1869. The river counties, St. Croix, Buffalo and Pierce, held first, second and third places respectively, with Trempealeau fifth, Polk eighth and Pepin eleventh. That section thus maintained its dominance in wheat growing. St. Croix, Buffalo, Trempealeau counties, together with the other older river counties, had, however, decreased considerably in absolute importance, while the newer counties, Pierce, Polk and Pepin, had increased. Still, all the counties of this group uniformly showed a moderate gain in "other crops," though to a greatly varying extent. Buffalo and St. Croix showed but small increase in this respect, while Pierce and especially Trempealeau showed considerable gain. In Vernon and Crawford counties the gain in "other crops" was large. Generally speaking, this gain in "other crops" represented decline in wheat growing. Inspection of the tables for "other crops" shows that the increase was pretty well distributed among all the different crops. This indicates that the farmers of this section, finding the growing of wheat less profitable than formerly, were casting about for a substitute crop, without having decided on any particular crop as yet. Further increase in the number of milch cows in Buffalo, Crawford, Trempealeau and Vernon counties shows how some farmers were solving the problem. Crawford and Vernon counties particularly reflect the general increase in the number of swine. Sheep had scarcely held their own during the decade. "Other cattle" had increased most of all. Buffalo and Pepin showed a moderate decline in this respect, while in Crawford, Pierce and Trempealeau counties the increase was marked. There was a general increase in the number of horses, which was marked in Vernon and Crawford counties.¹² So far, then, as there was a change from wheat cul-

¹² It would appear that the increase in horses is too marked to be considered as merely incidental to grain growing.

ture to the live stock industry in this section, it was in general in the direction of "other cattle" and horses, though dairying was increasing in a few counties in an important way. Wheat remained, however, by far the most important single crop and its cultivation the most important pursuit.

When we turn to the south-central group of counties we find a very striking decline in wheat growing.¹³ Dodge county presented a partial exception to this statement, having declined only from fourth to seventh place, while Green Lake held seventeenth place, Columbia, twenty-sixth, and Dane, thirty-seventh place. Jefferson retained thirty-third place, though showing an absolute decline in importance. All these counties showed large gain in other crops. Inspection of the separate tables for other crops proves that this increase was especially in corn, oats and barley,—the latter crop showing the most noteworthy increase.¹⁴

Turning to the tables for live stock, we find here a noticeable increase. Foremost in significance if not in actual numbers was the increase in the number of milch cows. This increase was marked in Jefferson county. This tendency represented the growth of the dairy industry in this section and was really the index of the displacement of wheat, as corn and oats are crops largely supplementary to dairying. There was a considerable increase in the number of swine, however, and this helps to account for the increasing amount of corn grown. Sheep showed considerable increase in Columbia and Green Lake counties. "Other cattle" had in general almost doubled in importance, while horses shared to some extent in the general gain. By referring again to Table III, it is seen that the decline in wheat growing was much more marked in Dane than in the other counties of this group. This is explained by the marked increase in the tobacco crop in Dane county, that county producing 5,371,242 pounds in 1879 or a little over 50 per cent. of the entire crop of the state for that year. Jefferson also produced a considerable amount of tobacco.¹⁵

¹³ See Figure 4.

¹⁴ In Columbia and Green Lake counties, rye showed a similar decrease.

¹⁵ See Table XXII. See Hibbard, *Hist. of Agric. in Dane Co.*, 155-75.

We may sum up the facts in reference to this section by saying that there had been a great decline in wheat growing and that general farming had taken its place preparatory to the more specialized industry of dairying, which showed a most significant, but as yet, not striking growth. In Dane county, the tobacco crop had to an important extent added to the general displacement of wheat.

The eastern and northeastern counties showed uniform increase in the importance of the wheat crop, except Calumet, Sheboygan and Winnebago counties, which had suffered a moderate decline. The continued influence of the forest environment in causing a more gradual and more prolonged development of the wheat industry was the most characteristic feature. Other crops had increased as well as wheat,—had, in fact, almost doubled in per capita yield in the three counties in which wheat had declined.¹⁶ One gets the impression in respect to this section that wheat had never been the one overwhelming crop. It remained, however, by far the most important single crop. Barley was the only other crop showing noteworthy increase, though small in absolute importance as yet.

The small though, in general, increasing importance of the live stock industry in this section was characteristic, though Calumet, Fond du Lac, and Washington counties present a partial exception to this statement. The most general increase in live stock was in milch cows and in "other cattle." In Calumet, Ozaukee, Sheboygan, and Washington counties the increase in milch cows was noteworthy. Fond du Lac, Kewaunee, and Manitowoc counties also showed some gain in milch cows. "Other cattle" showed the most general increase. Sheep had remained about stationary. There had been a moderate increase in the number of horses in most of the counties of this section. In Calumet, Ozaukee, Sheboygan, and Washington counties this increase was important.

The general tendency away from the wheat crop in the state as a whole was in this section reflected rather in its more slowly increasing importance. Undoubtedly the large home market for

¹⁶ Outagamie also had a little more than doubled "other crops."

bread-stuffs and the importance of the milling industry in this section had contributed to the stability of the wheat industry.¹⁷

The southern tier of counties had almost abandoned wheat growing. Iowa and Walworth constitute partial exceptions, the decline there being comparable to that of the south-central group. In Rock, Kenosha, Green, Lafayette, and Grant (to a less extent), the decline in wheat growing was excessive. The ravages of the chinch bug had been an important factor in this displacement of wheat.

What had taken the place of wheat in this group? "Other crops" combined show a marked increase, amounting to from 60 per cent. to 100 per cent. This increase was most marked in corn, which had increased about 100 per cent. in most of the counties. Oats showed the next largest increase,—from 50 per cent. to 100 per cent. Potatoes had declined, while Rock and Walworth counties showed important increase in the amount of barley raised. In Rock county, tobacco had displaced wheat to an extent comparable to that already noticed in reference to Dane county, though the increase in the tobacco crop was a little less marked. Several of the other counties of this group had also turned to tobacco, though in a much less important degree.

It is when we turn to examine the tables for live stock, however, that we get a full comprehension of the great change in agriculture in the southern counties during the decade. Milch cows had increased to a striking extent,—especially in Green, Iowa, Lafayette, Rock, and Walworth counties. Green county¹⁸ now held first place among the counties of the state both in the number of milch cows and in the rapidity of increase during the decade.¹⁹ The increase in "other cattle," in swine, and in horses, together with a moderate in-

¹⁷ See below p. 105.

¹⁸ "The worn-out wheat fields of Green county are being refertilized by the thousands of cows which find pasture where poor crops of grain and big crops of chinch bugs used to flourish, and the whole community saved from distress the past year by the great change in husbandry." Quoted from the *Monroe Sentinel* in the *Seventh Ann. Rep. of the Wis. Dairymen's Assoc.*, 125.

¹⁹ Here natural and social factors combined in an especial way to favor dairying, and it is proof of the strong influences tending to retain wheat as the staple crop that dairying did not displace that industry at a much earlier period. See *Bulletin of the Agric. Exper. Station, Univ. of Wis.*, No. 60, p. 18.

crease in the number of sheep showed, however, that the movement toward dairying was accompanied by a movement toward general stock raising. In the marked tendency away from wheat growing, dairying occupied a growing but as yet not a dominant, position.

Waukesha county remained just about constant during the decade in reference to the wheat crop. Stability characterized the development of its agriculture during the decade. The increase in the per capita yield of other crops combined amounted to nearly 50 per cent., and was distributed among the various crops, with the exception of potatoes, which showed a decline. The increase in the amount of barley grown was noteworthy. There was a general increase in all kinds of live stock, including milch cows as representing dairying. In this general increase wheat shared to a very trifling extent. It remained, however, the most important single crop.

The interior group of counties showed diversity in respect to the development of the wheat industry during the decade. Eau Claire, Richland, and Burnett counties showed increased importance in wheat growing, Dunn and Clark remained about constant, while the remaining counties had declined in that respect.²⁰ On the whole, this section showed a very considerable decline in wheat growing. Other crops showed very considerable increase. Adams, Marquette, and Waushara counties had to considerable extent substituted rye for wheat. Juneau, Marquette, Portage, Sauk, Waupaca, and Waushara counties showed a tendency toward potatoes. Oats, in a general way, shared in the displacement of the wheat crop. Adams, Marquette, Richland, and Waushara counties reflected in an especial way the general tendency toward dairying, by a considerable increase in the number of cows. The general movement in the state as a whole in reference to swine and sheep was reflected by an increase in the number of swine and stationary conditions as to sheep. As in other sections of the state, there was a noteworthy increase in the number of "other cattle" and a moderate increase in the number of horses.

²⁰ Barron is indeterminate, but shows considerable absolute importance in wheat growing.

The characteristic feature in this section is that there was already a strong tendency toward rye and potatoes, which were in the future to replace wheat to an increasing extent. That is, there was a growing specialization in reference to particular crops other than wheat. Peculiarities of soil afford the explanation of this tendency. On the other hand, there was no particular tendency toward specialization in the live stock industry. The wheat crop was still one of much importance in many of the counties, and the whole section presented the case of a general increase in the importance of agriculture in which wheat failed to share to the same extent as other crops and other pursuits.

In the state as a whole, the per capita yield of wheat declined from 24.28 bushels to 18.92 bushels, or about 22 per cent. The yield per square mile of improved land declined from 2,778 bushels to 1,709 bushels, or about 38½ per cent. The per capita yield of oats increased during the decade from 19.1 bushels to 25.0 bushels, or a little more than 30 per cent. Corn increased from a per capita yield of 14.2 bushels to 26.0 bushels,—an increase of about 83 per cent. In the state as a whole, the increase in the importance of the potato crop was small. Rye and barley were unimportant crops as yet in the state as a whole, but barley increased from 1.6 bushels per capita in 1869 to 3.8 bushels per capita in 1879,—an increase of 137½ per cent. On the whole, the movement away from wheat was not marked by specialization in the growing of any particular crop though oats and rye had increased less rapidly than corn and barley. In particular sections, however, there was some evidence of such specialization. Attention has already been called²¹ to the tendency toward barley in the eastern and southeastern counties and to the tendency toward rye and potatoes in some of the central counties. A further exception must be made in reference to the tobacco crop in Dane and Rock counties.

In a like manner there seems to have been a tendency toward general stock raising in the state as a whole rather than to specialization in any particular line.²² This statement also

²¹ See above pp. 76, 78.

²² The growth of the live stock industry is paralleled by an increase from 1.22 tons of hay per capita to 1.45 per capita. Other forage crops increased as well.

holds good for the individual counties. The number of swine had increased from 0.5 per capita to 0.9 per capita,—or nearly double the number in 1869. Sheep had remained stationary at 1.0 per capita. Horses had increased from .24 to .27 per capita, the increase being general except in the southeastern part of the state, and most important in some of the newer counties where there was a gain in agriculture at the expense of lumbering. The most general and most important increase in live stock, however, seems to have been in "other cattle" which increased from .31 per capita to .47 per capita,—a larger increase than that of all the other decades since 1850 combined. The increase in the number of milch cows from .29 to .36 per capita was well distributed over the state, every county with at least .30 per capita in 1879, showing increase during the decade. The increase in milch cows was particularly important, however, in those counties of the southern part of the state which had declined most rapidly in the growing of wheat. The dairy industry had made an important place for itself in the farm economy of the state; but it was not yet dominant and shared with other pursuits the tendency away from wheat.

Wheat still remained the most important single crop in the state as a whole and, according to the *Tenth Census*, the acreage in wheat in the state as a whole was about equal to the acreage in corn and oats combined. But even this was a great change and a great improvement. It meant the cessation of farming to wheat year after year and the possibility of rotation in wheat culture. It meant the raising of other crops which formed the basis of the live stock industry and thus the retention on the farm of the elements of soil fertility. It meant a partial solution at least of the problem of transportation as it affected the farmer. Not the least of all it meant a better and happier life for the farmer,—more stable and more prosperous conditions and a larger sphere for the exercise and cultivation of all his faculties. The situation at the end of the decade is thus summed up in the *Transactions of the State Agricultural Society*.²³

"As our herd increase, our acres of grass multiply and a

²³ *Trans.*, 1879-80, pp. xxi and xxii.

better system of farming is being pursued in Wisconsin. Sections of wheat are a thing of the past. Mixed husbandry is universal and our people are wiser, happier and richer therefore. . . . It may be truthfully said that the farmers of Wisconsin have reached the time and laid hold of the principles promulgated by the order of the Patrons of Husbandry 'that they would sell on the hoof and in the fleece and not from the half-bushel.' It may safely be said that Wisconsin has passed that period of speculation, heavy loans, and exorbitant interest, incident to the settlement of a new state and has now entered upon a career of stability and solid, permanent growth."

CHAPTER IV

THE DECADE 1880 to 1890

If it was during the decade 1870-1880 that wheat growing suffered its first serious decline in Wisconsin, and if it was during the same decade that the other crops and other pursuits which were to displace wheat first took firm hold, it remained for the following decade to see these tendencies, under the influence of the varying conditions that prevailed, work out their full effect in almost completely driving wheat growing from the state. Comparison of the charts for 1879 and 1889 reveals the extraordinary extent to which this occurred. It was as if some mighty power had brushed to right and to left, leaving but a few patches of wheat on the outside edges of the state.

The acreage sowed to wheat declined during the decade from 1,948,160 acres to 744,080 acres,—a decrease of 62 per cent. The total yield declined from 24,884,689 bushels in 1879 to 11,698,922 bushels in 1889,—a decrease of 53 per cent. The per capita yield declined from 18.92 bushels to 6.94 bushels,—a decrease of 63 per cent., while the yield per square mile of improved land declined from 1,709 bushels in 1879 to 764 in 1889,—a decrease of about 55 per cent. Whereas in 1879 the acreage in wheat amounted to as much as that in corn and oats combined, in 1889 the acreage in corn alone was one and one-half times and the acreage in oats alone two and one-fifth times as great as the acreage in wheat. Even barley now exceeded wheat in yield per capita, the relative yields for the whole state being 9.0 bushels and 6.94 bushels respectively.

By referring to Table III, it will be seen that the county that ranked first in 1889 was of no greater absolute importance than the county that ranked fourteenth in 1879. Every county without exception had declined in importance in wheat culture

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and every section shared in the decrease. The decline was so extreme as to almost blot out differences between different sections and disarrange the method of grouping previously followed.¹ Buffalo, one of the river counties, held first place, but St. Croix which occupied that place in 1879 had by an unparalleled decline dropped to forty-fifth place. Pepin stood fifth, Pierce tenth, Vernon twelfth, Trempealeau twentieth, and Polk twenty-second. The northeastern group of counties held together better,—evidence of the greater stability in that section—and stood well up toward the top. Calumet ranked second, Washington third, Manitowoc sixth, Kewaunee seventh, Outagamie tenth,—the others standing fairly well up on the list. Of the south-central group of counties, Dodge and Green Lake alone retained any considerable importance. Dodge ranked fourth as against seventh in 1879, but with great absolute decline. Green Lake ranked ninth as against seventeenth in 1879. Columbia, Dane, and Jefferson had also declined upwards. At the bottom of the list were the southern counties together with some from the interior group. Monroe ranked eighth, having risen from nineteenth place in 1879. The extraordinary decline of a few counties like St. Croix and Chippewa caused many of the other counties to advance in rank, though having declined greatly in absolute importance.

St. Croix and Buffalo counties having stood side by side in rank at every previous census period since they were important enough to be considered at all, a comparison of the two now so widely separated in rank may prove interesting. Other crops—especially oats and potatoes—had increased to a considerably greater extent in St. Croix county, during the decade, than in Buffalo county. The same statement holds true with reference

¹ Inspection of the table giving the total yield of wheat in the state for each year shows that it was not until about the middle of the decade that the decline in wheat growing in the state as a whole set in seriously. Inspection of the statistics furnished in the reports of the Secretary of State also show how the acreage and total yield for the various counties began to fall off about that time. Reference to the tables giving the price of wheat in New York, Chicago, and Milwaukee shows that beginning with about 1884 there was a considerable and prolonged decline in the price of wheat. This fact, together with the depression already existing in the wheat industry and the further fact that dairying and tobacco growing had already taken a strong hold, must account in the main for the rapid decline in wheat.

to live-stock other than milch cows and horses.² This explains in part the extreme reaction from wheat growing in the former county. Apparently the farmers of St Croix county took advantage of the depression in wheat growing to substitute other crops, and to stock up their farms inasmuch as there had formerly been an almost entire absence of live stock in that county. Previous excessive specialization in wheat growing in St. Croix county was now followed by a general rush to get out of that and into something else. Apart from the low price of wheat, however, the extraordinary ravages of the chinch bugs constituted an additional very important cause of the decline in the growing of wheat in that county. As the wheat crop afforded the best nurse for the pest, other crops were likewise endangered by the cultivation of that crop and this constituted a further reason for its discontinuance. Later, however, the expedient of sowing other grains with wheat was adopted with considerable success. The chinch bug ceased its depredations to a considerable degree, and, after all, the withdrawal from wheat, to so extreme an extent, in St. Croix county proved temporary as that county held second place in wheat growing in 1899.³

Since there was a general decline in wheat and a consequent disarrangement of groups, it is preferable to take up the different crops and the different branches of live stock and examine to what extent each was instrumental in displacing wheat, rather than to take up the counties by groups. The large increase in the oats crop has already been noted. This increase was general except in the southeastern counties. The actual increase in acreage amounted to 70 per cent.

² Cows increased in number per capita about equally in the two counties, while horses increased considerably in Buffalo County and decreased slightly in St. Croix county. The decline in horses in St. Croix county was doubtless incidental to the decline in wheat growing.

³ By referring to the statistics furnished in the report of the Secretary of State it is seen that the decline in wheat growing in St. Croix county had been going on for several years. The rural population was, however, proportionally smaller in St. Croix county and account must be taken of this fact.

The above information was obtained in conversation with a man who was engaged in farming in St. Croix county at that period.

See also references, p. above, as to the ravages of the chinch bugs in 1887 and proximate years in Wisconsin.

It has been seen that the acreage in corn increased relatively to wheat during the decade. There was practically no actual increase in acreage, however, and the yield, partly on account of a poor crop, declined. Some of the western and interior counties, however, increased considerably in corn,—particularly Adams, Buffalo, Dunn, Pepin, Pierce, Portage, Trempealeau, and Waushara.

Potatoes increased about 50 per cent. in per capita yield during the decade. This increase was most marked in the interior and in the western counties. Adams, Barron, Pierce, Portage, St. Croix, Waupaca, and Waushara were most noteworthy in this respect. Ozaukee, Washington, and Waukesha counties were important in the eastern section.

Rye also increased about 50 per cent. in per capita yield in the state as a whole. The increase was distributed to every part of the state except the southeastern counties. Adams, Marquette, Pierce, Polk, St. Croix, Kewaunee, and Manitowoc were among the most important.

Barley increased 137 per cent. in per capita yield. The increase in cultivation of this crop was strongly localized and was confined chiefly to the eastern, south-central and southeastern counties. Pierce in the west also showed exceptional increase in barley.

Milch cows again increased in every county in the state during the decade. The per capita increase in the state as a whole amounted to .11 per capita, the largest increase for any decade in the history of the state. The increase was not confined to the counties which had declined excessively in wheat growing, but was most important in those counties; it was most marked in the southern and in the eastern sections. Buffalo, Trempealeau and Richland counties were especially noteworthy in other parts of the state.

Swine declined in the state as a whole from .9 to .8 per capita. In the southwestern counties and in the northern river counties there was some increase. Sheep declined from 1.0 per capita to .6 per capita. There was a slight increase, however, in the western counties. "Other cattle" increased but slightly in the state as a whole,—from .47 to .49 per capita. Not a few counties

showed a per capita decline in this respect. Grant, Iowa, Lafayette, and Trempealeau counties, however, showed very large increase in number of "other cattle." Buffalo, Crawford, Jackson, and Richland counties showed large increase in the same respect.

Horses remained at .27 per capita as in 1879. A decline in horses in the eastern, south-central and southern counties was balanced by a gain in the interior and western counties.

The tobacco crop had nearly doubled within the state during the decade. Dane county produced almost as much tobacco in 1890 as was produced in the whole state in 1880. Rock county also showed large increase in this crop, while Jefferson county produced more tobacco in 1890 than Rock county did in 1870, and Rock county in 1870 produced two-thirds of the entire crop of the state. Columbia, Vernon, Green, Crawford, Grant, Walworth, Lafayette, and Pierce counties also showed large gains in the tobacco crop.⁴ Though the increase in the tobacco crop was by no means so regular and uniform as appears from the figures given at the different census years⁵ there can be no doubt that tobacco was fast displacing wheat in those sections where the soil was best adapted to the former crop, and the fact that the crop after all showed a large net increase at the close of each decade is proof that, on the whole, it was found profitable. Unlike dairying, the tobacco crop was largely localized and hence displaced wheat in a merely local way. As has been already noted, however, the extent to which it displaced wheat was out of all proportion to the acreage which it occupied.

In 1889 but 428,547 pounds of hops were produced in the entire state. Juneau and Portage counties produced together about 57 per cent. of the entire crop of the state, each producing about equal amounts. Sauk county produced less than one-third as much as either of these counties. Columbia, La Crosse, and Milwaukee counties produced the most of the remainder.⁶

It thus appears that wheat was being largely displaced by

⁴ See Table XXII.

⁵ See Hibbard, *Hist. of Agric. in Dane Co.*, 159-60 for a discussion of the ups and downs in the tobacco producing industry.

⁶ *Eleventh Census of the United States.*

oats in every part of the state except in the southeastern and in a few of the eastern counties; that potatoes were to an increasing extent being substituted for wheat in the interior counties and in the western counties; that rye was increasing in the state generally, except in the southeast; that barley was gaining largely at the expense of wheat, and perhaps of corn also, in the eastern, southeastern and south-central counties. Corn, on the other hand failed to increase with the increase of population and improved land, although losses in some sections were balanced by gains in other sections. It is legitimate to conclude that in the western and in the interior counties the increase in corn was at the expense of wheat.

The general and marked tendency toward stock-growing in all of its branches, except sheep husbandry, noted at the close of the last decade, had spent its force and there were either declines or only small increases during the decade in all branches of that industry proper.⁷ In dairying, however, there was a

⁷ At the beginning of the decade attention was called to the high price of land where dairying was pursued and it was pointed out that on such land Wisconsin could not compete with the cheaper lands of Texas and Kansas for the production of beef cattle and other live stock. (*Trans. of State Agric. Soc.*, 1879-80, pp. 210-11.)

The following table shows the relation between the value of land in various counties in 1879 and 1889 and the increase or decrease of neat cattle during the decade in the same counties. In a general way it shows important increase of neat cattle in the counties with lower priced land, and a decrease where land was comparatively high in value. In some cases there was large increase in the number of milch cows with comparatively low value of land. This, however, does not invalidate the general principle. (From tables XXIII, XIX and XVIII.)

The total per capita increase in "other cattle" from 1880 to 1890 in Kansas, Nebraska, and Texas combined—states in which the value of land may be supposed to have been considerably less than in Wisconsin, was from 1.64 to 1.94 or .30 per capita. The corresponding per capita increase in the number of milch cows in these three states was from .39 to .47. These figures may be compared with the corresponding increase in Wisconsin for the decade—from .47 to .49 in respect to "other cattle" and from .36 to .47 in respect to milch cows. (See Tables XVIII and XIX). It thus appears that milch cows were just as numerous per capita in these three states taken together in 1890, as in Wisconsin, though the rate of increase had been somewhat smaller during the previous decade. It is probable, however, that equal numbers of milch cows were much more significant for dairy purposes in the latter state than in the former three states.

On the other hand both in absolute number of "other cattle" per capita and in the per capita rate of increase during the decade in respect to the same, Wisconsin was very much less important than the three other states

marked increase, which, like the decline in the culture of wheat, was exceptional in that it affected every county in the state that had ever been important in the wheat growing industry. We are accordingly warranted in concluding that dairying had most of all displaced wheat growing, but that it had also gained at the expense of other pursuits in some sections of the state. Dairying by 1889 had become the great dominant industry of the state. Wheat was no longer the staple. The dairy product was supreme.

On the whole then the development of agriculture during the decade was toward specialization. But it was the kind of specialization that profits,—the specialization that assigns certain pursuits to sections to which they are best adapted, and best of all, which maintains the proportion of diversity that gives balance to a well ordered agricultural economy.

In this decline in the production of wheat within the decade, which was accompanied by a turning to other farm pursuits and especially to dairying, the ravages of the chinch bugs, already noted in reference to St. Croix county, played no inconsiderable part. It was estimated that the loss in the wheat crop in Wisconsin, due to this source, in 1887, amounted to 3,004,490 bushels, while the menace to other crops by a con-

taken collectively. (The per capita figures for Kansas, Nebraska and Texas are worked out from the statistics of the *Tenth* and *Eleventh Censuses of the United States*.)

Counties.	Value of land. Per acre.		Neat Cattle. Per capita.		Milch Cows. Per capita.	
	1879.	1889.	1879.	1889.	1879.	1889.
Buffalo	\$27.50	\$32.06	.65	.90	.43	.71
Calumet	53.50	64.79	.43	.58	.44	.81
Crawford	23.33	25.81	.58	.88	.85	.56
Grant	26.27	36.73	.94	1.37	.45	.74
Green	34.58	47.08	1.21	1.19	.97	1.32
Iowa	29.58	33.54	1.09	1.65	.57	.95
Jefferson	45.92	65.22	.52	.49	.57	.89
Kenosha	33.55	55.61	.67	.51	.58	.76
Lafayette	30.99	42.91	1.25	1.85	.66	.92
Rock	46.76	60.33	.70	.65	.46	.32
Trempealeau	25.50	23.85	.65	1.04	.44	.98
Walworth	44.71	62.80	.63	.58	.56	.92
Waukesha	60.11	90.32	.48	.39	.47	.53

tinuation of wheat growing was shown by a further loss of 1,804,250 bushels in the corn crop and 1,742,750 bushels in the oat crop from the same cause.⁸

The most general and most immediate cause of the decline in wheat growing during the decade, however, was the persistently low level in the price of wheat which, after the fluctuations of the previous years, was reached about 1884.⁹ This decline in price was decisive in making wheat growing unprofitable in Wisconsin and thus reënforced those other more ultimate causes of decline which had long been in operation and which have been taken up below for discussion.¹⁰ While conditions in Wisconsin necessitated a higher price for wheat in order to meet increasing cost of production, a growing surplus of wheat in the markets of the world resulted in declining prices. This surplus had its most important source in the increase of the wheat growing area west of the Mississippi river in the United States—especially in Minnesota, the Dakotas, and Kansas. This expansion which had been going on steadily for a number of years increased greatly after 1878 and in 1884 reached a maximum for the decade of about eighteen and one-half million acres, at which figure the acreage remained for the rest of the decade, with the exception of a temporary decline in 1885.¹¹ The volume of wheat shipped from the United States to Europe during the three years 1878–79 to 1880–81, “amounted to nearly five hundred million bushels or more than double the greatest quantity exported in any triennial period prior to 1878–79,” and thereafter the price of wheat was downward “in all the markets free to American grain.”¹² The wheat growing area in the Dakotas increased from 720,000 acres in 1882 to nearly 5,000,000 acres in 1892, while the railway mileage within the same territory increased from 1,225 miles in 1880 to 3,556 miles

⁸ *Rep. of the Com. of Agric.*, (U. S.) for 1887, p. 56.

⁹ See Tables VII–IX.

See also *Journal of Pol. Econ.*, 1: 372. See *Ibid.*, pp. 68–103 for an article—*The Price of Wheat since 1867*—by Professor Thorstein B. Veblen.

¹⁰ See Chapter X.

¹¹ See “table of the acreage of wheat in the United States” in *Journ. of the Roy Statist. Soc.* vol. 58, between pp. 82 and 83.

¹² *Ibid.*, 83.

in 1886, and to 4,705 miles in 1890. The wheat area continued to increase in Minnesota also throughout the decade notwithstanding the decline in price.¹³ The significance of these facts is that wheat grown on these cheap, fertile lands came into competition with the wheat grown on the higher priced, exhausted lands of Wisconsin.¹⁴

Further, exports of wheat from Russia which had increased only about seventy millions of bushels from 1869 to 1883, increased nearly one hundred million bushels from 1884 to 1888 and still more rapidly thereafter.¹⁵ Still further, exports of wheat from India, which had been comparatively insignificant previous to 1880-81, averaged over thirty-one million bushels per annum for the following ten years.¹⁶

Under the influence of the large supplies thus thrown upon the markets of the world, the average price of wheat declined in Great Britain from 5s. 5 3-4d (\$1.33) in 1879 to 3s. 8 1-2d (\$1.00) in 1889, while the average price of No. 2 spring wheat declined in Chicago from \$.975 (4s. 0d) in 1879, to \$.74 (3s. 1-2d.) in 1887, and to \$.848 (3s. 5 1-4d.) in 1889.¹⁷ It was this decline in the price of wheat which in part compelled and which in part afforded the opportunity for the marked change to dairying and other farm pursuits more profitable than wheat growing.

¹³ *Ibid.*, 84.

¹⁴ See *Ibid.*, 98, where the cost of production in the Dakotas, the center of the most rapid expansion in the wheat area, as compared with the cost in the western states, in general, (including all the rest of the wheat growing states west of Pennsylvania and east of the Rocky Mountains) is given as 57 to 70.

¹⁵ *Ibid.*, 80.

¹⁶ *Ibid.*, 93-4.

¹⁷ *Ibid.*, 86, 101. Compare with Table IX.

CHAPTER V

THE PERIOD AFTER 1890

The decade 1890-1900 need not detain us long. The same agencies continued to operate in the displacement of wheat in the state as a whole. The yield per capita for the entire state declined from 6.94 bushels to 4.35 bushels,—or approximately 37 per cent. Wisconsin no longer raised sufficient wheat for her own needs. The decrease per square mile of improved land was from 764 bushels to 512 bushels,—or 33 per cent. The acreage in wheat had declined to 555,614 acres,—a decrease of 25 per cent. The acreage in corn increased 34 per cent., and was now almost treble the acreage sowed to wheat. The acreage in oats increased 45 per cent. and now amounted to more than four times the acreage in wheat. The acreage in barley equalled, and the acreage in rye amounted to more than 65 per cent. of the acreage in wheat.¹ The per capita yield of oats increased from 36.0 bushels to 40.6 bushels; of corn from 20.2 bushels to 25.8 bushels; and of potatoes from 9.9 bushels to 11.9 bushels. In rye and in barley the per capita yield remained at 2.5 bushels and 9.0 bushels respectively as in 1889.²

Inspection of the chart of the wheat area in 1899³ shows what a slender foothold wheat growing had come to have in the state at that time. Two small areas in the neighborhood of Green Bay and Lake Winnebago in the east and near the great bend of the Mississippi river on the west were all that remained of the great field of wheat that once covered the southern half of Wisconsin from lake to river. By 1899 the upper river counties had again

¹ *Twelfth Census of the United States.*

² See Tables XI-XIV.

³ See Figure 6.

asserted their supremacy in respect to the relative importance of the different sections in wheat growing. Buffalo retained the lead secured in 1889, but showed considerable decline in the absolute importance of the wheat crop. St. Croix by as sudden, and by almost as extreme a change as had occurred in the previous decade when a great decline was shown, again stood next to Buffalo county, but holding second place. A very large absolute gain since 1889 was thus shown in the former county, though still not one-third as important as in 1879. Polk held third place and Pierce fifth. Trempealeau and Pepin held tenth and eleventh places respectively, while Vernon and Crawford ranked fifteenth and eighteenth respectively. The importance of the eastern section was represented by Calumet in fourth place,—a decline from second place in 1889. Kewaunee, Door, Manitowoc, and Brown follow in order, holding sixth, seventh, eighth, and ninth places respectively. The remaining counties of the state were so unimportant that discrimination in rank is almost entirely without significance.

Buffalo, however, produced in 1899, 27.1 bushels of wheat per capita, which was higher than the average for the state when wheat culture was at its height. St. Croix, Calumet, Pierce, and Polk follow with 21.4, 17.5, 16.7, and 16.3 bushels per capita respectively. Polk and Pierce as well as St. Croix showed an absolute increase in the importance of the wheat crop, the increase being considerable in Polk. Trempealeau remained almost stationary. There thus appeared a general though moderate reaction in favor of wheat growing. A similar return to wheat appeared in the eastern group of counties, though to a smaller extent. A few other counties in the western part of the state and in the interior showed a similar tendency. The partial reaction in favor of wheat in the river counties was, generally speaking, accompanied by either a decline or a small increase in other crops, with the exception of barley, which showed a large gain. Buffalo, Pepin, and Trempealeau, however, made quite large gains in oats, and the first two showed a moderate increase in corn. The potato crop had declined most of all, and in all of the counties of the western group.

In the eastern counties there was a general increase in oats,

potatoes, corn, and especially in barley. The increase in barley was large and in oats, potatoes and corn moderate. Corn was, of course, of small absolute importance in this section. Rye about held its own. This general increase in other crops in the eastern section signifies in part the more moderate extent of the reaction in favor of wheat in some of the counties of that section, and in part the further moderate and prolonged growth of agriculture as a whole.

In the river counties, the loss in the number of milch cows in Pierce and Trempealeau counties and the fact that milch cows showed little or no increase in Pepin, St. Croix, and Vernon counties indicate that the change from wheat growing to dairying during the previous decade had been too rapid and extreme to be permanent in those counties.* Buffalo, Crawford, and Polk

*If we take "dairy cows 2 years old and over" and "other cows, 2 years old and over" as together equivalent in the *Twelfth Census* to "milch cows" in the previous censuses, there would still be a decrease from .52 milch cows per capita to .51 per capita during the decade in Pierce county, and a decrease from .93 to .81 per capita in Trempealeau; while the increase in Pepin would be only from .50 to .56, in St. Croix, from .50 to .53, and in Vernon .59 to .66. If it be objected that the population of the state was becoming urban to such an extent as to vitiate the per capita figures for milch cows, it can readily be answered that the per capita figures for other live stock and for grains would be vitiated in an equal proportion, so that for purposes of comparison the figures would still remain valid and significant. Further, while milch cows (including both classes of cows 2 years old and over) increased in actual number only 7 per cent. in Trempealeau county and only 15 per cent. in Pierce county, improved land increased 24 per cent. in the former and 21 per cent. in the latter. In *Bulletin of the Agric. Exper. Stat., Univ. of Wis.*, No. 88, *Dairy Industry in Wisconsin*, (Sept. 1901), p. 9, it is pointed out that according to the growth in the number of cheese factories, creameries, and combined factories there had been a "remarkable development" of the dairy industry in the north-central and the northwestern portions of the state during the previous five years. By referring to p. 10 of the same bulletin, however, it will be seen that in spite of the failure of milch cows to increase as fast as as improved land in Trempealeau and Pierce counties, the former county gained four cheese factories, two butter factories and one combined butter and cheese factory, and the latter gained three cheese and fifteen butter factories, while in Pepin and Vernon counties where milch cows increased faster than improved land there was a loss of two butter factories in the former, and a loss of one cheese factory and five butter factories as against a gain of one "combined" factory in the latter. In St. Croix county, too, milch cows increased in actual numbers 21 per cent. while improved land increased 23 per cent. and there was an increase of one cheese factory, two skim stations and five butter factories. Accordingly it appears a doubtful method to estimate the growth or decline in dairying by the increase or decrease in the number of dairy factories. The relative size of the factories and the relative importance of dairying on the farm must also be considered. (See *Bulletin of the Agric. Exper. Stat., Univ.*

counties, however, showed further important increase in the number of milch cows. It is significant that three of the former counties⁵ had either increased or remained constant in wheat growing during the past decade, while all but one of the latter counties had declined to a further extent in that respect.⁶ The very great increase in the tobacco crop in Crawford and Vernon counties must also be noted in accounting for the decline in wheat in those counties. The acreage in tobacco in Crawford county in 1899 amounted to 1121 acres and the amount of tobacco produced was 1,509,830 pounds. In Vernon county the area in tobacco for the same year was 3,833 acres, and the crop amounted to 4,759,520 pounds. This constituted an enormous increase in both counties. The northeastern counties gave further proof of stability and of the absence of any marked tendency toward wheat growing again, by a moderate but general increase in the number of milch cows and thus in the importance of dairying.⁷

There is nothing further in reference to the live stock industry in these two sections that does not seem to be common to other sections of the state, and that does not thus appear to be irrelevant to the wheat industry, since in the remaining sections of the state that crop had so completely disappeared. Of the counties adjacent to these two sections and which were of considerable importance in 1889, some few remained moderately important in wheat growing, though in general having declined to a greater or less extent. The most important of these are Shawano, Jackson and Monroe. Shawano county seems to show nothing at variance with the conditions in the northeastern counties just discussed unless in the more rapid increase in the number of milch cows. This fact has no special significance in

of Wis., No. 140, [Sept. 1906] p. 4) On the other hand, the total number of gallons of milk produced increased more rapidly than the total number of milch cows, indicating better dairy cows, while the increase in the number of factories probably indicates an increased amount of capital invested in the industry as a whole.

⁵ St. Croix, Pierce, and Trempealeau. See Table III.

⁶ Polk alone increased in wheat growing.

⁷ If, as suggested above, we include both classes of "cows 2 years old and over" as equivalent to "milch cows" of the previous censuses, the increase in dairying appears much more marked.

relation to the wheat industry. Jackson county had remained nearly constant in the production of wheat during the decade, the decline being small. The yield of wheat per capita had even increased slightly. In common with the other western counties there was a considerable increase in the number of sheep, but this is also true of the southwestern counties. In the remainder of the state sheep had declined in number per capita. The increase in the number of horses was also large but this appears to be without special significance in reference to the wheat crop. Monroe county had declined in wheat during the decade. Probably this fact can be connected with the great increase in the tobacco crop,⁸ though the smallness of the area⁹ planted to tobacco in that county in 1899 precludes laying too much stress upon this point. Unlike Jackson county the increase in the number of milch cows was large. It is legitimate to assume that the increase in dairying was to a certain extent at least at the expense of wheat growing. Burnett, Eau Claire, Barron, and Dunn counties all showed a moderately increased importance in the wheat industry during the decade, but no one was of much more importance than sufficient to meet its own needs. Burnett, Barron, and Dunn differed from the other northwestern counties in the large increase in the amount of potatoes produced. The increase, however, in Eau Claire was slight. Undoubtedly the adaptability of the soil to potatoes, except in Barron county, affords the explanation. The increase in the potato crop probably diminished the area that would have otherwise been sown to wheat. Burnett showed especial increase in the number of milch cows.¹⁰

Further decline in wheat in Dodge county seems to have been balanced by an increase in corn, oats and barley,¹¹ while the number of milch cows increased to a marked extent. A similar

⁸ See Table XXII.

⁹ The area planted to tobacco amounted to 126 acres.

¹⁰ The city of Eau Claire works somewhat to the disadvantage of Eau Claire county in this respect. Inspection of the census figures shows, however, absolutely few milch cows or other live stock in the county.

¹¹ Dodge county produced 61.1 bushels of barley per capita in 1889 and 73.8 bushels per capita in 1899 and was at both periods the most important county in the production of barley, in the state.

increase in dairying accompanied the further decline of wheat growing in Green Lake county. There was a large increase in oats and corn, and a considerable increase in potatoes in this county, while barley continued of considerable importance as before. Columbia county during the decade quintupled the amount of tobacco produced. This was at the expense of both wheat and barley, apparently, as the latter crop declined almost as rapidly as the wheat crop. An increase in the potato crop was probably partly instrumental in displacing both wheat and barley. The considerable decrease in wheat in Washington county was balanced by an increase in all other crops except in rye. Barley was particularly important. Washington county also showed a very considerable increase in the number of dairy cows. Ozaukee presents a situation similar to that in Washington. The further decline in wheat growing in Fond du Lac county presents no features different from the other counties adjacent.¹² In Richland county there had been an increase in the tobacco crop and in dairying almost exactly parallel to that in Monroe county. The large increase in corn probably had more effect than the tobacco crop in displacing wheat. The increase in corn, oats and potatoes seems to have been responsible for the decline of wheat in Sauk county. The potato crop approximately doubled in per capita yield. The number of dairy cows also increased largely. The considerable decline in wheat in Outagamie county was replaced by an increased amount of oats and corn. The number of dairy cows also increased considerably.¹³

Wheat had become so unimportant in the remaining counties of the state by 1889¹⁴ that it is unnecessary to discuss in detail the further decline or slight increase during the following decade. The potato crop continued to increase largely,—especially in the interior counties. Adams, Juneau, Marquette, Portage, Wau-

¹² The city of Fond du Lac reduces the apparent importance of Fond du Lac county in reference to all crops and live stock.

¹³ Corn and oats being in part the basis of dairying cannot exercise their full influence in addition to that of dairying in replacing other crops.

¹⁴ See Figure 5.

paca, and Waushara¹⁵ counties are especially noteworthy.¹⁶ The tobacco crop again more than doubled in the state during the decade.¹⁷ In many of the south-central and southern counties, the further increase in tobacco was instrumental in the added displacement of wheat. The spread of the tobacco crop into some of the newer counties and its probable influence in displacing wheat there has already been noted.¹⁸

Dairying continued to increase in the state as a whole during the decade, but by no means so rapidly as during the previous decade. The number of dairy cows increased from .47 per capita in 1889 to .48 per capita in 1899.¹⁹ This increase in the number of milch cows was not so general as during the previous two decades; considerable increases in some counties were offset by moderate declines in other counties. The connection between the further increase or decline of wheat growing and the increase or decline in dairying during the decade has been so far as it is important already considered in discussing individual counties or sections. It need only be said here that in a general way an important decrease in wheat growing was apt to be accompanied by a considerable increase in the number of dairy cows

¹⁵ The yield of potatoes per capita in Waushara county increased from 49.9 bushels in 1889 to 119.3 bushels in 1899. The yield per capita in Waupaca county was 49.7 bushels in 1899, but had increased but little during the decade. It is to be noted that the decline in wheat was much greater in Waushara than in Waupaca county during the decade.

¹⁶ See Table XV.

¹⁷ See Table XXII.

¹⁸ See above pp. 94-5.

¹⁹ See Table XVIII. If both classes of "cows 2 years old and over" be included as together equivalent in the *Twelfth Census* to "milch cows" of the previous censuses the per capita increase in milch cows in the state as a whole for the decade is somewhat larger, i. e. from .47 to .52. The following table presented on p. 5 of *Bulletin of the Agric. Exper. Stat. Univ. of Wis.* No. 88, (Sept. 1901) shows that the increase in dairying was, however, absolutely as well as proportionally much greater during the decade 1879-1889 than during the following decade:

No. of pounds of dairy products made in Wisconsin.		
	Butter	Cheese
1850.....	3,633,750	400,280
1860.....	13,611,328	1,104,300
1870.....	22,473,036	13,288,581
1880.....	33,842,336	19,535,324
1890.....	60,355,499	54,614,861
1900.....	80,000,000	60,000,000

and vice versa.²⁰ But quite often an increase in wheat growing was accompanied by an increase in the number of dairy cows,²¹ and a decrease in respect to the former by a decrease in respect to the latter.²² The reason is plain: wheat growing had in most sections of the state become so unimportant by 1889 and dairying so important that changes in the latter industry were quite liable to be independent of changes in the former industry. Further, large declines were for the same reason no longer possible in wheat except in a few instances and large increases did not occur. Much the same thing can be said about the live stock industry and its relation to the wheat industry. The instances where that connection appears to exist have already been pointed out. There was a considerable increase in the per capita number of swine in the state as a whole, while sheep declined to some extent and horses again remained stationary. According to the census figures there was a marked and general decline from .49 per capita to .33 per capita, in respect to "other cattle" in the state as a whole, but it is very probable that this decline is to some extent only apparent, and arises in part from a change in the method of classification of cattle in the *Twelfth Census*.²³

Inspection of the table of prices for wheat shows that the price declined to even a more marked extent than during the previous decade. Reference to the table giving the average cash valuation per acre in different counties shows a marked increase in that valuation. Under these circumstances wheat could not re-

²⁰ Compare Monroe, Pierce, Green Lake, and Richland counties.

²¹ e. g., Polk County.

²² e. g., Manitowoc county.

²³ See above, notes 4 and 7. On p. 55 of *Bulletin, U. S. Dept. of Agric., Div. of Stat. No. 24, Relations of Population and Food Products, etc.* (1908) appears the following statement:

"The weight of evidence indicates that calves were not counted at the censuses prior to 1900. Calves should therefore be omitted from comparative statements of resources in the different census years." This suggestion has been followed, but seems to be only partially valid as applied to Wisconsin. If "other cows 2 years old and over" be included among dairy cows and excluded from "other cattle," the decline in the latter class appears still more extreme. The statistical evidence of a very considerable decline in the number of "other cattle" during the decade 1889-1899 is corroborated by the general opinion of persons best qualified to speak in that respect.

main in cultivation to any considerable extent, and gave place to more profitable crops and pursuits.

Wheat growing has shown further decline since 1899 according to the statistics furnished by the *Wisconsin Census Report of 1905*, although the year ending June 1, 1905, was unusually unfavorable from an agricultural point of view.²⁴ The acreage in wheat declined from 555,747 acres in 1899 to 210,010 acres in 1904—a decline of 62 per cent. The total yield declined from 9,005,170 to 2,700,813 or 70 per cent., while the per capita yield for the state as a whole declined from 4.35 bushels to 1.21 bushels, or 72 per cent.

The same sections remained dominant in wheat growing in 1904 as in 1899, but with greatly diminished absolute importance. Buffalo county retained first place both in per capita yield (7.9 bushels) and in yield per square mile of improved land. Kewaunee followed next in order in per capita yield (6.8 bushels) but on account of low yield per square mile of improved land gave precedence to Trempealeau county (5.9 bushels per capita) in degree of specialization. Door, Burnett, and Jackson counties each produced between 4 and 5 bushels per capita; Pepin, Shawano, Pierce, Monroe, and Dodge each produced between 3 and 4 bushels per capita. Eau Claire, Polk, Vernon, Calumet, Dunn, Washington, Green Lake, Oconto, and Crawford each produced between 2 and 3 bushels per capita; the remaining counties of the state all produced less than 2 bushels of wheat per capita in 1904.²⁵

What other crops or farm pursuits were instrumental during the five years 1899–1904 in the further displacement of wheat growing? Of the counties that were most important in wheat growing in 1899 those of the western section showed in general

²⁴ "It may be properly stated that the year ending June 1, 1905, was a very unfortunate year for taking the census. The crops were, on the whole, exceedingly light and the prices low." *Wisconsin Census Report, 1905*, part I, p. viii.

Barley, potatoes and hay are the only important farm crops showing a greater yield in 1904 than in 1899. There was also an increased acreage in respect to each of these three crops. For the state as a whole there was a decline in both acreage and yield in respect to rye, corn and oats. The decline in the acreage of oats was small, amounting to about 5 per cent.

²⁵ See Table I.

an increased acreage in oats in 1904, while those of the eastern section showed generally a reduced acreage as well as a reduced per capita yield in that crop. The per capita yield of oats in Buffalo, St. Croix, Polk, Pierce, Trempealeau, Pepin, Jackson, and Monroe was 113.0, 122.4, 66.6, 84.2, 112.0, 66.0, 94.2 and 59.8 bushels respectively—an increase in each case. Inspection shows a decline in the potato crop in many of the wheat counties,—Door, Shawano, Monroe, Jackson, Eau Claire, and Brown counties being exceptions. There was a general decline in corn and rye. All of the counties important in wheat growing in 1899 showed a large gain in barley in 1904 except Calumet where there was a reaction from that crop. Notwithstanding the decline in the tobacco crop in the state as a whole,—both in acreage and in the number of pounds produced—most of the western wheat counties showed a large gain in that crop as a partial offset to the loss in wheat.²⁶

Both eastern and western sections shared in the general increase in the hay crop—the increase being marked in the eastern counties. This increase in the hay crop was attended by very considerable increase in the number of sheep in the western section, by considerable decline in sheep in the eastern section generally,²⁷ and by a considerable increase in horses in both sections.²⁸ Owing to the differences in classification in respect to neat cattle, in the *State Census of 1905* and in the *Twelfth Census of the United States* the movement in respect to other cattle than dairy cows can not be accurately determined. It seems, however, that there was a heavy loss in that respect in all of the eastern wheat growing counties while in most of the western wheat counties “other cattle” either held their own or showed considerable gain. This gain was particularly marked in St. Croix, Monroe, and Vernon counties. All of the counties that had been important in wheat growing in 1899 showed a large increase in the per capita number of milch cows. The western counties

²⁶ See Table XXII.

²⁷ The number of sheep declined in the state as a whole.

²⁸ That is, in “horses and mules” as compared with “horses” in the *Twelfth Census of the United States*. There was a general loss in the number of swine in nearly all parts of the state.

showed the most marked increase.²⁹ This increase in the number of milch cows represented the growing importance of the various branches of the dairy industry.³⁰

It thus appears that various other farm crops and pursuits of which dairying was probably the most important had shared in the further reduction of the wheat area during the period 1899 to 1904. Further, there had been more tendency toward

²⁹ The increase in the per capita number of milch cows for the state as a whole was from .48 to .55. In *Bulletin of the Agric. Expt. Stat., Univ. of Wis.* No. 140, (Sept. 1906) p. 17, attention is called to the fact that there was an "extended tier of counties on the western boundary of the state in which the erection of new factories appears to have stopped," though it is acknowledged that "in many cases the number of cows tributary to the creameries is much higher than the average." This lack of factory growth in the case of Pierce, St. Croix, and southern Polk counties is attributed as possibly due to the fact that these counties "have been and still are great grain-raising counties." Though this last statement may be accepted as partially valid, reference to the large per capita increase in the number of milch cows in these three counties and in the other western counties will serve to further emphasize the acknowledged danger in estimating the growth or decline of dairying by the number of dairy factories. The increase in the number of milch cows in the western counties was attended by an increase in the number of gallons of milk produced, such that the amount of milk produced per cow was higher in each of these three counties than in Shawano where "a most phenomenal extension" was noted (p. 15). The comparative figures for these four counties are as follows:

Counties	Per capita	Per capita	Increase	Pounds of Milk per cow, 1904.
	1899	1904		
Pierce	.46	.69	.23	4117.4
St. Croix	.50	.71	.21	3936.1
Polk	.70	.94	.24	3280.3
Shawano	.50	.67	.17	3097.5

The slower increase per capita in Shawano county can scarcely be attributed to the large increase in population in that county as improved land increased in that county between 1899 and 1904 while improved land declined in area in the other three counties taken together, for the same period. On the other hand the final product was in general more valuable in the cheese-making east than in the butter-making west, and doubtless required the investment of a larger amount of capital. In several of the eastern counties a large increase in the number of milch cows was partially concealed by the growth of city population, as in Brown and Door counties.

	1900	1905	Increase
³⁰ Farm butter	25,000,000 lbs.	54,500,000 lbs.	88%
Factory butter	55,000,000 lbs.	88,500,000 lbs.	60%
Cheese	60,000,000 lbs.	110,000,000 lbs.	83%

(See *Bulletin of the Agric. Expt. Stat., Univ. of Wis.*, No. 140, [Sept. 1906], pp. 6 and 7. Also pp. 5, 7-9. See also map accompanying the same).

It is probable that the *State Census for 1905* affords more liberal results as to the number of dairy cows than does the *Twelfth Census of the United States*.

specialization in the eastern than in the western counties, and that specialization was in the direction of the cheese making industry.³¹ The latest phase of development in wheat growing in Wisconsin thus presents no new feature.³²

³¹ See *Bulletin of the Agric. Exper. Stat., Univ. of Wis.*, No. 140, (Sept. 1906), pp. 10 and 14.

³² Estimates of acreage and yield for the years 1905-1908, compiled from the Reports of the Wisconsin State Board of Agriculture—supplemented by statements by Mr. John M. True, Secretary, January 12 and 18, 1909—are as follows:

Years	Acreage	Bushels
1905	219,493	3,165,801
1906	213,754	2,813,479
1907	145,643	2,330,288
1908	122,775	2,209,050

Corresponding estimates of the United States Department of Agriculture, compiled from the Year Books, 1905-1907 and from the Crop Reporter, August and October, 1908, are as follows:

Years	Acreage	Bushels
1905	474,233	7,893,381
1906	288,040	4,690,816
1907	210,000	2,955,000
1908	207,000	3,748,000

The marked discrepancy between the figures in the two estimates—especially for the years 1905 and 1906—are due in part to the fact that the state estimates are acknowledgedly conservative, while the federal estimates are probably too liberal.

CHAPTER VI

THE FLOURING INDUSTRY IN WISCONSIN

Reference has already been made to the more important centers of flour manufacture in Wisconsin previous to 1849.¹ According to the *Seventh Census of the United States*, there were 117 flour mills and grist mills in Wisconsin, representing an investment of capital amounting to \$1,020,550. These mills consumed \$2,651,623 worth of raw material and turned out a product valued at \$3,536,293. The chief centers of production were Milwaukee, Janesville,² and Watertown.³

The three factors determining the localization of the milling industry at this period were superior water power, superior situation in reference to the wheat areas, and superior situation in respect to the centers of population and in respect to markets. The accompanying table compiled from the reports of the board of trade of Milwaukee gives statistics in regard to that city for the years between the census periods,⁴ but figures for the remainder of the state are scanty. The flouring industry in Wisconsin, as elsewhere at this period, was dispersed among many small establishments, whose motor power was furnished at first exclusively by water-mills or by wind-mills.

According to the census of 1860, the number of establishments had increased to 374, with an investment of \$3,526,869. Raw material to the value of \$9,532,510 was consumed and yielded a product worth \$11,570,834. The industry had thus more than trebled in importance during the decade. During the early part

¹ See above p. 17.

² *Nell. Hist. of Freeborn County, Minnesota*, 456.

³ See above p. 17.

⁴ See Table VII.

of the decade, the receipts of flour at Milwaukee were chiefly via the Milwaukee and Mississippi railroad from the southern part of the state. Later, with the spread of the wheat area into the central and western parts of the state, receipts via the Milwaukee and La Crosse railroad took the lead. The latter railroad also passed through a region in which water powers were more numerous.⁵ In 1860 Milwaukee and Rock were the two counties most important in the manufacture of flour. The former produced about 16 per cent. and the latter about 10 per cent. of the total product of the state at that period. Green⁶ and Dodge come next in order of importance, while Dane, Fond du Lac, Jefferson, Walworth, and Winnebago were also important. Other counties produced a considerable amount.

During the next decade the industry nearly doubled, while the number of establishments increased to 581,—an increase of about 55 per cent. A tendency toward concentration thus appears. Milwaukee county had increased its production to 20 per cent. of the total for the state. Rock, Walworth, Green, Grant, and Waukesha counties suffered considerable decline in milling,⁷ due no doubt in part to the decrease of wheat culture in those counties.⁸ Jefferson county more than doubled in amount of capital invested and in value of product, while wheat growing had also increased in importance. In Lafayette and Racine counties, however, milling increased very considerably while wheat growing declined. In Columbia, Dodge, Dane, and Iowa counties, notwithstanding the increased importance of wheat growing, milling decreased not only in proportion to population, but absolutely as well. This decline was slight in Dodge county. In the eastern,⁹ central and western parts of the state wheat growing and milling increased together. Winnebago county showed a marked increase in milling and now produced about 8

⁵ *Rep. of Milwaukee Chamber of Com., for 1858 and 1859.*

⁶ Monroe was a town of considerable importance in the manufacture of flour and pork at an early date.

⁷ The decline was marked in Green county.

⁸ Waukesha county, however, remained about stable in wheat culture. See Table III.

⁹ The decline in wheat growing in Kewaunee was only temporary. Outagamie county, though increasing in production of wheat, showed a marked decline in milling, if the census figures are trustworthy.

per cent. of the total for the state. In the western part of the state, Chippewa, Eau Claire, Buffalo, and St. Croix showed the largest increase.¹⁰

It thus appears that in general the same influences were at work determining the localization and growth of the milling industry as in the preceding decade. The increase was most marked in the eastern part of the state, where the three factors of water power, wheat and market were most favorable and operated together to the greatest advantage.

During the decade 1870 to 1880, nearly every portion of Wisconsin shared the prosperity of the milling industry in the northwest generally,¹¹ which followed the introduction of the "new process" in the manufacture of flour.¹² The "milling-in-transit" privilege¹³ gave the smaller centers a relative advantage over Milwaukee, so that the flour product of Milwaukee county dropped to about 15 per cent. of the total in 1880. Winnebago county had increased her production to about 9 per cent. of the total for the state, while Rock county, in spite of the decline in wheat growing, had more than regained the importance of 1860. Jefferson and Green counties barely held their own in absolute importance while Buffalo, Racine, Washington, and Green Lake counties showed an absolute loss since 1860. In the remaining counties of the state, however, the milling industry increased very materially. This increase was particularly marked in the northeastern and northwestern portions of the state, where the same influences as in 1870 combined in a special way to bring

¹⁰ Washington, Green Lake, and La Crosse counties are indeterminate, as no statistics appear for 1859, but were quite important in milling by 1869 and had probably increased in importance during the decade.

¹¹ Spring wheat flour commanded a premium at once and the flouring industry was stimulated throughout the spring wheat growing region. See quotations in *Rep. of Milwaukee Chamber of Com.*, just previous to 1874 and just following that year; Adams, *Commercial Geography*, 61; *Farm and Factory*, (La Crosse, Wis.) May 11, 1877.

¹² The number of establishments increased to 705, an increase of about 21 per cent. The amount of capital invested, the cost of raw materials used and the value of the product increased from 40 to 50 per cent. While the increase in the industry as a whole was greater than the increase in population, the absolute increase was somewhat less than during the previous decade and the proportional increase much less.

¹³ An arrangement by which wheat was stopped at the point in question, manufactured into flour and then moved to its destination at the original rates.

about that result.¹⁴ The southern and south-central portions of the state, generally speaking, reflected the marked decline in wheat growing in those sections by a less rapid increase in flour milling.

The localization of the industry at the close of this decade shows that the wheat area had not yet moved so far outside of the state as to cut many of the former establishments off from a supply of wheat. This situation was soon to be the case, however. The rapidly growing importance of the city of La Crosse in the flouring industry attracted attention, and not a few believed that here lay the future center of that industry in the northwest. The decline of Wisconsin as a wheat producing area, led to a consideration of the possibility of a supply of wheat for milling purposes from the new area farther west. For obtaining this wheat, La Crosse was favorably located. The editor of the *Farm and Factory*¹⁵ quoted, approvingly, a circular issued by the Board of Trade of that city, calling attention to its advantages for the manufacture of flour. It was pointed out that the situation of the city was such as to enable it to control all the primary markets of the wheat region of Minnesota, being the gateway to the east¹⁶ and located on the only direct railroad route between all eastern points and Minnesota. The cheapness of fuel, which was derived from the refuse of its lumber manufactures, was noted, and the additional fact that the Mississippi river would operate to secure favorable railroad rates was referred to.

The rapidity with which the wheat area was moving was, however, underestimated by these prophets. The wheat industry in southern Minnesota was already on the decline. La Crosse continued to increase her output for some years, but Minneapolis was already producing a million barrels of flour, and with the construction of the northern railroads to east and west, began about 1879 to add to this output about 500,000 barrels per year. In

¹⁴ Iowa, Portage, and Sauk counties also showed a marked increase.

¹⁵ May 11, 1877. [From the *La Crosse Daily Democrat*] The *Northwestern Miller* was published by the same parties who published the *Farm and Factory*.

¹⁶ "Three-fourths of all the wheat raised in Minnesota, whether shipped in the berry or as flour, passes through La Crosse on its way to eastern markets."

1879 the offices of the *Northwestern Miller* were removed to Minneapolis,¹⁷ on the grounds of the preëminence of that city in the milling industry.

It is unfortunate that after 1880 the federal census fails to give statistics for the milling industry by counties. For the state as a whole, however, there was a loss in every respect except in the amount of capital invested,—the loss being marked in respect to the number of establishments.¹⁸ This decline was parallel with the general depression in the milling industry of the northwest that set in following the expansion due to the introduction of the patent process.¹⁹

As the wheat area moved still farther to the north and west and still greater dependence was had upon the railroads to supply the necessary wheat, the smaller centers of production found themselves unable to compete with the more important centers, especially as the railroads either chose to discriminate in favor of the latter or were compelled to do so. Milwaukee, on the other hand, showed a great expansion in the flouring industry during the decade.

From the figures of the *State Census for 1885*, the most important centers of the milling industry can be pointed out, though the figures bear such evidence of untrustworthiness that they are worthless so far as absolute amounts are concerned.²⁰ In 1885, outside of Milwaukee and La Crosse counties, the counties adjacent to the Fox River and Lake Winnebago were most important. Here the cultivation of wheat still persisted to a considerable extent. A considerable decline is indicated in the northwestern counties, though wheat growing retained something of its former importance here also. Dane, Jefferson, and Rock counties still manufactured considerable quantities of flour, though showing a decline since 1880. In general, it may be said that by 1885 the distribution of wheat growing within the state

¹⁷ See the issue of March 7, 1879.

¹⁸ Note the continued tendency toward concentration.

¹⁹ See *Northwestern Miller* for Feb. 1, and Nov. 28, 1884.

²⁰ According to the figures of the *State Census for 1885*, the milling industry in Wisconsin fell off nearly one-half in value of product as compared with the *U. S. Census* figures for 1880. This is plainly improbable. In the *State Census for 1885*, the columns are not correctly footed up, the totals being almost twice as large as the figures in the columns warrant.

had ceased to exercise any considerable influence upon the localization of the milling industry. The *State Census for 1895* shows the great importance of Douglas county in the manufacture of flour and grist mill products.²¹ The increase had been most striking there during the decade, but was in no way related to the wheat industry in Wisconsin. A decline in the importance of La Crosse county is indicated. By 1900, according to the *Twelfth Census*, the milling industry in the state as a whole had nearly recovered what it had lost during the decade 1880 to 1890. The number of establishments had increased to 717, or 12 more than in 1880. This increase in the number of establishments was probably due as in other parts of the country, to the establishment of many small mills for the grinding of other grist mill products than flour.

The city of Milwaukee, as a flouring center, merits special attention on account of its importance. In 1854 there were five flour mills in Milwaukee, with a total output of 130,000 barrels. The hydraulic power of the river was used exclusively, at that time,²² but two years later one of the largest mills was equipped with new machinery and an "immense steam engine."²³ By 1860 the number of flour mills in the city had increased to fourteen and the individual mills had succeeded in establishing a market for their flour in New York and New England.²⁴ The output in 1862 was reduced by the burning of two of the mills of the city and continued low until 1866, on account of the fact that wheat was worth relatively more than flour.²⁵ In 1866 there began a rapid increase in the output, so that for a time Milwaukee produced more flour than any other western city.²⁶ The abrogation of the reciprocity treaty with Canada which excluded Cana-

²¹ According to the *State Census of 1885*, there were 36,000 barrels of flour, worth \$252,000, manufactured in Douglas county. These figures had increased in 1895 to 3,019,200 barrels, worth \$9,209,140. The city of Superior includes almost the whole of the industry in the county.

²² See *Rep. of Board of Trade for 1854*.

²³ *Ibid.*, for 1856.

²⁴ *Rep. of Chamber of Com. for 1860*.

²⁵ This was brought about in part by the relatively higher freights on flour as compared with wheat, and in part by the decline in foreign demand. See *Reps. of Chamber of Com. for 1862-65*.

²⁶ *Ibid.*, for 1866.

dian flour from our markets was said to have been one of the causes of this increase, but the failure of the wheat crop in other parts of the country was probably a more important cause.²⁷ At any rate the increased demand resulted in more mills and greater capacity, and ultimately in overproduction of flour and in depression in Milwaukee as elsewhere. While the output increased somewhat in the years 1873–1875, there was another decline in production during the following three years.²⁸ So far from Milwaukee being the most important center of flour production in the west, St. Louis produced nearly 1,000,000 barrels in excess of that city in 1871.²⁹ Up to this time the precedence attaching to St. Louis represented in part the superiority of winter wheat flour over spring wheat flour. By 1874, however, the “new process” had been introduced into all the larger mills in Milwaukee, and a largely increased output might have been expected in consequence of the preference for spring wheat flour. That the increased output was neither large nor permanent was due to several causes. We have seen that Milwaukee county, during the decade 1870–1880, declined relatively to the total production of the state, and it was pointed out that the “milling-in-transit” system worked to the advantage of the smaller producing centers and perhaps also of Minneapolis.³⁰ Another probable reason for the small increase in output of flour in Milwaukee during the decade was the deterioration in the quality of the wheat after about 1865. Wisconsin wheat was noted for its high quality in earlier days, but as the wheat industry declined the quality of wheat depreciated.³¹ A still further cause for the small increase in output was that during the time of Milwaukee’s preëminence as a wheat market much speculative business was done and while Milwaukee millers had a large stock of wheat to select from they came into competition with the demands of many other buyers in various parts of the country and

²⁷ *Ibid.*

²⁸ According to the *Rep. of Chamber of Com.* for 1876, the reduction in the output of flour that year was due to the closing of two mills for repairs.

²⁹ *Ibid.*, for 1871.

³⁰ See above, note 13. See also *Report of Milwaukee Chamber of Com.* for 1886.

³¹ *Rep. of Milwaukee Chamber of Com.* for 1868. See above p. 59.

were forced to pay high prices for their wheat.³² The constant fluctuations³³ in the price of wheat in an important speculative market constitute another serious drawback, and it is significant that Milwaukee mills did not begin to increase their output to any marked extent until after that city had become unimportant as a wheat market.³⁴ It appears further that steam motor power had been found more expensive than the water power of the smaller milling centers.³⁵

In 1879 the foreign demand for bread-stuffs again came to the rescue and the output of flour increased to a considerable extent. Lower prices for wheat probably stimulated the foreign demand in turn. Notwithstanding the competition with Minneapolis and Duluth for the necessary wheat,³⁶ the output of flour in the Milwaukee mills increased with more or less regularity until 1893. During the four years 1889-1892, the increase amounted to nearly 50 per cent. In consequence of the depression following the financial disturbances of 1893 the flour output fell off over 260,000 barrels in that year. Insufficient receipts of wheat in the following year forced the mills of Milwaukee to draw upon Duluth and Chicago for supplies to meet the deficiency. The mills of Minneapolis experiencing a similar shortage, there resulted competition to an unusual degree for the stock of wheat in territory more or less tributary to both. The greater importance of the industry at Minneapolis, together with the more favorable situation of that city with respect to competing lines of transportation, enabled her millers to wrest concessions from the railroads in the struggle for possession of this wheat. This was the more easily accomplished at a time when the railroads were struggling desperately for traffic at any

³² See *Reports* for 1862-1865.

³³ A frequent complaint among millers.

³⁴ In like manner Chicago has never become greatly important as a milling center, while Minneapolis has never been important as a speculative wheat market.

³⁵ *Rep. of Milwaukee Chamber of Com.* for 1869.

³⁶ "The crop of spring wheat in 1881 proved largely deficient in quantity, while the production of flour near the sources of supply, probably reached its highest capacity in that year, almost absorbing the whole crop." *Rep. of Milwaukee Chamber of Com.* for 1882.

rate however low.³⁷ To secure a supply of wheat on equal terms the Milwaukee Chamber of Commerce went before the Interstate Commerce Commission with their complaint. In 1897, a favorable decision was secured but discrimination went on as before. Accordingly further proceedings were instituted in 1898, but with little avail, as the commission declared itself without power to remedy the situation, while one of the offending roads asserted its inability to stop the discrimination.³⁸

In spite of the improvements in the methods and in the cost of handling grain and flour, and in spite of the improvements in transportation directly across Lake Michigan, the disadvantage which Milwaukee suffers in being at an ever increasing distance from the sources for the supply of wheat, with the added disadvantage in rates which this situation tends to bring about, works both against a restoration of her former commercial importance and the growth of her milling interests. The high water mark of 1892 has never since been reached. The output in 1904 amounted to 1,320,611 barrels.³⁹

³⁷ A comparison of the increase of the flour output of Minneapolis and Milwaukee is made in the *Rep. of Milwaukee Chamber of Com.* for 1894, and the more rapid growth of the former city in that respect is said to be wholly due to the inequitable differences in rates on wheat to Milwaukee and to Minneapolis.

³⁸ See *Reps. of Milwaukee Chamber of Com.* for 1894-98. See also *Report of the Interstate Commerce Commission* for 1897, pp. 23-4; *Ibid.*, for 1898, pp. 24, 33-4; for 1900, pp. 212-13.

³⁹ *Rep. of Chamber of Com.* for 1904.

CHAPTER VII

MILWAUKEE AS A WHEAT MARKET

The development of Milwaukee as a wheat market was closely related to the growth of the wheat growing industry within the state. The same rapid rise to even greater relative importance and the same quick decline to comparative unimportance is to be noted in the former as in the latter case.¹ However, while the opening up of the new and cheap wheat lands to the west and north subjected the wheat growers of Wisconsin to ruinous competition, on the other hand, every mile of railroad that was pushed out into the region west of the Mississippi river and that continued tributary to Milwaukee contributed to the importance of that city as a wheat market. But just as the farmers of Wisconsin discovered that they could not control the railroads of the state to their own interest, so Milwaukee was to see the railroads which her business men had projected and which had ministered to her growth and prosperity in her earlier history, contribute later, under the influence of various economic causes, to the development of her rivals. Her merchants were to see the city sink from the position of a great railway terminus, with thousands of miles of tributary lines, to the position of a way-station, through which wheat and flour were billed to other markets. Her Exchange was destined to sink from being the business center of the greatest primary wheat market in the world to the position of adjunct to the commercial organization of her great rival at the foot of the lake. Nor was it in the power of her citizens to avert this consequence, though by no means lacking in enterprise or resourcefulness. It was the resistless oper-

¹ Compare the yearly receipts of wheat at Milwaukee with the yearly production of wheat within the state of Wisconsin. See Tables IV and VIII.

ation of the economic causes that set up and pull down cities, that swiftly, in this case, and surely worked out their results.

In the spring of 1841 the first shipment of wheat was made from Milwaukee. The amount was 4,000 bushels and the destination Canada.² There had been much competition between Milwaukee and Chicago for the wheat of southern Wisconsin and northern Illinois and it was the wheat of this region that first gave Milwaukee her reputation as a wheat market.³ When the Galena and Chicago Union railroad was built, Chicago succeeded in diverting the grain to that point. The Beloit and Mississippi railroad was projected with the view of bringing this grain back to Milwaukee. The wheat growers of the southern part of the state were threatening to establish railroad connections with Chicago, and it was felt that something must be done if their trade was to be held for Wisconsin markets.⁴

We are thus early introduced to the competition of markets which played so important a part in the development of railroads within the state. During the year 1851 the Milwaukee and Waukesha railroad was built to Eagle Center and by 1857 to Prairie du Chien. In 1858, La Crosse was reached and Milwaukee was put in a favorable position for the grain trade of the region west of the Mississippi river.⁵ In the meantime, the whole southeastern portion of the state had been covered with a network of railroads tributary to that city, thus insuring her pre-

² *Rep. of Chamber of Com. for 1858.*

³ *Ibid.*, for 1850.

⁴ That Milwaukee had no very great lead in commerce over some of the other lake ports in the state in 1850 is shown by the following table, taken from the *American Railroad Journal*, 1851, p. 64:

PORTS.	TOTAL EXPORTS AND IMPORTS.	IMPORTS ALONE.
Milwaukee	5,927,119	3,828,650
Racine	2,108,700	1,452,750
Southport	1,213,399	629,791
Sheboygan	583,991	517,800
Port Washington	326,576	278,311
Green Bay	232,367	151,537
Manitowoc	62,848	49,129

⁵ Milwaukee had suffered damaging competition from Chicago at La Crosse previous to the completion of the railroad to that point. *Rep. of Chamber of Com. for 1858.*

éminence as the commercial emporium of the state.⁶ Attention was early called to the fact that Milwaukee enjoyed a differential of 156 miles from Prairie du Chien as compared with Chicago⁷ and it was pointed out that on account of the depth of the lake, uninterrupted navigation existed throughout the year across to Grand Haven, Michigan.⁸ It was thus claimed that with demonstrable superiority over Chicago in respect to transportation by both land and water, Milwaukee could successfully compete for the wheat of Iowa and Minnesota.

In 1855, some wheat came north from Illinois, via Beloit and Janesville, to Milwaukee.⁹ Whitewater was in 1856 the market for thirty miles around—grain having come from as far as McHenry county, Illinois. The wheat was stored there until it could be shipped east at the opening of navigation.¹⁰ In 1858, of 2,317,000 bushels of wheat transported on the Milwaukee and Mississippi railroad, only 350 bushels went to Chicago.¹¹ In 1859 the same road brought over 450,000 bushels of wheat and 14,674 barrels of flour from Prairie du Chien to Milwaukee. The larger portion of this was delivered to the road by the steam ferry boats and represented the trade of the trans-Mississippi region.¹²

Chicago had not been idle, however. The Chicago, St. Paul and Fond du Lac railroad was completed throughout, from Cary, Illinois, to Oshkosh in 1859 and became the Chicago and Northwestern railroad in that year. Much difficulty was experienced in

⁶ See map of railroads in Wisconsin for the decade 1850-1860 (Figure 9). See also above p. 42.

⁷ *Rep. of Board of Trade* for 1855.

⁸ *Ibid.*, for 1856.

⁹ *Rep. of Mil. and Miss. R. R. Co.* for 1855.

¹⁰ *Governor's Message and Accompanying Documents*, 1857, 2: 427-34.

¹¹ "Nineteen-twentieths of the business of the country tributary to the road have been done with Milwaukee." *Rep. of Mil. and Miss. R. R. Co.* for 1858. It was asserted, however, that the road had been forced on account of financial reasons to discriminate in favor of Chicago. *Rep. of Milwaukee Chamber of Com.* for 1858.

The growing importance of Milwaukee as a wheat market was due in part to the superiority of the wheat marketed there. The wheat of Illinois had deteriorated while that of Wisconsin was of prime quality. Wisconsin wheat was said to have brought from 8 cts. to 10 cts. more per bushel than Illinois wheat. See *Rep. of Board of Trade* for 1856. See also *Rep. of Milwaukee Chamber of Com.* for 1858.

¹² *Rep. of Mil. and Miss. R. R. Co.* for 1859.

preventing this road from diverting the wheat from Milwaukee to Chicago.¹³ In 1855 the Green Bay, Milwaukee and Chicago railroad was built from Milwaukee to the Illinois state line to meet a road at that point built from Chicago. This road, while at first tributary to Milwaukee, was later, in connection with the trunk lines east from Chicago, a formidable competitor of the lake lines, and in this way served to bring about the downfall of Milwaukee's preëminence as a wheat market.

Milwaukee profited chiefly, however, during the first decade by the great development of the wheat area within the state itself. Even in 1858, out of total receipts of 4,876,117 bushels, 750,000 bushels were brought in by team.¹⁴ Minnesota did not begin to export wheat until 1859, while exports from Iowa, via Milwaukee, had not yet attained the importance of later years.

Racine, too, continued to be a market not to be despised. In 1858 there were 913,376 bushels of wheat and 10,136 barrels of flour shipped from that point as compared with exports of 3,994,213 bushels of wheat and 298,129 barrels of flour from Milwaukee for the same year.¹⁵

Milwaukee quickly recovered from the effects of the panic of 1857 and the next year the Chamber of Commerce was organized. In the same year "grades of wheat" were first established and the first warehouse and elevator was erected at the depot of the La Crosse railroad.¹⁶ In 1849 out of total exports from Milwaukee amounting in value to \$2,098,469.36, shipments of wheat and flour constituted \$1,949,731.29.¹⁷ By 1859 notwithstanding the growth in other branches of commerce, it could still be said that the "chief feature in the commerce of Milwaukee was the large and rapidly increasing trade in grain."¹⁸ In 1860 one-third of the total receipts of wheat and flour at Milwaukee came from Illinois, Iowa, and Minnesota, two-thirds of which (about 2,400,000 bushels) came from the latter two states,

¹³ "Chicago . . . put forth every effort fair and unfair to divert the trade from this city." *Rep. of Milwaukee Chamber of Com. for 1858.*

¹⁴ *Ibid.*

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ *Am. R. R. Journal*, 1850, p. 344.

¹⁸ *Rep. of Chamber of Com. for 1858.*

constituting the "entire grain trade of the upper Mississippi,"¹⁹ and the prediction was soon made that Chicago could not long compete with Milwaukee as a market for wheat.²⁰ The interruption of navigation on the Mississippi river by the breaking out of the Civil War also operated to the advantage of Milwaukee. Owing to the competition between the Detroit and Milwaukee, and the Lake Shore and Michigan Southern railroads, Milwaukee at this time enjoyed the same all-rail rates east as Chicago. This gave Milwaukee a further advantage for the time being. The production of wheat increased largely in Minnesota and in northwestern Wisconsin, territory that was naturally tributary to Milwaukee,²¹ so that by 1862 receipts of wheat at Milwaukee were for the first time larger than those of Chicago, and the former became the "greatest primary wheat market in the world."²²

Waukesha county increased her production of wheat and 1,086,716 bushels of wheat were brought into Milwaukee by team in 1862. On account of the ravages of the chinch bug and the consequent short crop in Wisconsin in 1864, receipts in that year fell off considerably, but recovered to a considerable extent in 1865. Nearly one-half of the receipts of the latter year came from Minnesota.²³ In 1866, a noteworthy feature was the increasing proportion of flour and wheat carried via Chicago by the all-rail lines, which were becoming more and more able to compete with the lake carriers. The latter method of transportation involved extra loading at Grand Haven. As it had always been recognized that Milwaukee's supremacy depended upon the ability of the lake carriers to compete successfully with the all-rail lines, the possibility of the future decline of that city as a wheat market began to be considered by her own citizens, and the incoming president of the Chamber of Commerce in 1870 pointed out the fact that it was impossible to longer rely upon commerce alone, and advocated the establish-

¹⁹ *Ibid.*, for 1860.

²⁰ *Ibid.*, for 1861.

²¹ See wheat charts for 1859 and 1869 (Figures 2 and 3).

²² *Rep. of Chamber of Com.* for 1862.

²³ *Ibid.*, for 1865.

ment of manufactures. The construction of the Northern Pacific railroad, and the growth of the milling industry at Minneapolis and of the wheat trade of the city of Duluth were undoubtedly further significant facts of which the far-seeing took note. As if to forestall the competition of these rising centers of the flour and grain trade, the Report for 1871 calls attention to the preëminent facilities and other advantages of Milwaukee for the grain trade, and notes that steps had been taken to guard against unfavorable discrimination by the railroads. In response to the general demand for cheaper transportation, the Chamber of Commerce lent its aid to that cause and succeeded in securing a considerable reduction of tolls and other charges.

As a result of the large wheat crops of 1872 and 1873, receipts of wheat at Milwaukee reached the high total of 28,457,937 bushels,* while the receipts for the next two years were almost as large. Naturally there was much complaint of lack of storage facilities, of which the railroads were said to have a monopoly. A further result of the increased receipts was the stimulus given to speculative dealing in wheat and in 1875 transactions "on change" amounted to 197,000,000 bushels.²⁴ Receipts in 1876 fell off one-third as a result of deficiency in the wheat crop that year. The railroads with their greatly increased mileage entered into a life and death struggle with each other and with the lake carriers for a share of the diminished traffic. All-rail rates declined to the basis of transportation by water, and the winter movement of grain from the interior was greatly enlarged.²⁵ To a considerable extent this grain merely passed through or around Milwaukee and did not enter into the real trade of that city. Renewed apprehension was excited as to the effect of this movement upon the business of the Exchange.²⁶ When receipts increased in 1878 to the extent of nearly two million bushels this apprehension was allayed and Vice-President Britt expressed himself as no believer in the

²⁴ *Reps. of Chamber of Com. for 1872-75.*

²⁵ *Idid.*, for 1876.

²⁶ See address of Vice-President N. P. McLaren, *Rep. for 1877.*

* *Id. e.*, in 1878.

idea that "we have reached the climax of our grain trade."²⁷ Such proved to be the case, however, as Milwaukee never again equalled the receipts of wheat for the year 1873. The supremacy had already passed from that city, as the receipts of wheat at Chicago in 1878 were nearly 8,000,000 bushels in excess of the receipts at Milwaukee the same year. The shortage was said to be due to the deficiency in the spring wheat crop, and a similar assertion was made the following year. As the federal census showed a wheat crop in Wisconsin in 1879 but little below the maximum this must be accepted as but a partial explanation. Minneapolis was, however, becoming more and more a competitor of Milwaukee for the wheat in territory common to both, while examination of the wheat chart for 1879 shows the great decline in the amount of wheat being produced in the part of the state directly tributary to Milwaukee.²⁸ Much of the wheat that formerly came to Milwaukee, now came as flour, and even then came in large part via Milwaukee on through bills of lading and did not enter into the business "on change" there at all.²⁹ Receipts declined still further in 1881 and, the business of the city continuing prosperous, it was asserted that the prosperity of the city and of the northwest generally was no longer wholly dependent upon the profitable cultivation of wheat.³⁰ The city was indeed becoming more a center for manufactures and less a merely commercial center. The manufacture of flour in the city was just entering upon the great expansion which was to continue for a decade or more.³¹ Less and less wheat was exported and an increasing proportion was

²⁷ *Rep.* for 1878, p. 15. "The fact is clearly illustrated that the minimum cost of rail-transportation will afford a good margin for profit in favor of the water rate. Herein we find the chief element that has in the past contributed to make a great commercial city of Milwaukee, as well as the best assurance of her future prosperity." *Ibid.*, p. 18.

The significance of this lies in the fact that the competition of the railroads had forced the building of larger and more economical vessels on the lake, and in consequence the lake carriers were more nearly holding their own again.

²⁸ Minneapolis had produced 1,551,798 barrels of flour in 1879, while Milwaukee produced but 752,133 barrels during the same year.

²⁹ *Reps. of Chamber of Com.* for 1877-80.

³⁰ *Ibid.*, for 1881.

³¹ See Table VII showing the amount of flour manufactured in Milwaukee.

ground into flour.³² Parallel with the decline in receipts, there occurred a great decline in speculative dealings in wheat. This was by no means a disadvantage to the millers of the city.

The receipts of wheat at Chicago were now nearly three times as large as those of Milwaukee, while by 1883 Duluth almost equalled the latter city in this respect. Increased shipments from 1884 to 1887 were in large part merely through shipments and accordingly were of minor significance. This is brought out clearly by the drop in receipts in 1888 when the railroads discontinued reporting through shipments. By 1886, it was acknowledged that Milwaukee was no longer important as a wheat market.³³ Reductions in rates of storage had been made in 1885 and further reductions were made in 1887, but without avail. Complaint was also made that the railroads failed to operate the elevators so as to best serve the interests of the city. The elevators of the city were becoming less and less public in their character,—a circumstance quite in keeping with the decline of Milwaukee as a speculative wheat market. President Wall ascribed the decline of Milwaukee as a primary grain market to the decline in the trading in futures and urged the restoration of future options.³⁴ This was mistaking effect for cause. The recommendation was carried out, but receipts continued to steadily decline during the following three years.

Reference has been made in dealing with the flour industry in Wisconsin to the discriminations on wheat in favor of Minneapolis and Duluth as against Milwaukee. These discriminations also existed against Chicago. As a result, the commercial organizations of the latter two cities, formerly rivals, now drew closer together and made common cause in their struggle for more equitable treatment by the railroads.³⁵ It was suggested that Chicago make the "receipts of Milwaukee grain elevators that comply with the regulations of her Board of Trade as to

³² Only 2,193,539 bushels were exported in 1882, while 6,059,290 bushels were used for local consumption and manufacture.

³³ *Rep. of Chamber of Com. for 1886.*

³⁴ *Rep. for 1900.*

³⁵ "The fact that rail freights on grain are relatively lower to Lake Superior than to Lake Michigan is the cause of the decline of Milwaukee as a shipping center. Chicago faces the same proposition." *Rep. for 1903.*

inspection and storage deliverable on contracts in the Chicago market."³⁶ In 1904, there was the usual complaint, however, of unfair discrimination in rates, and the grain trade was said not to be in a satisfactory condition.

In order to avoid the expense of unloading and reloading cars for shipment directly across Lake Michigan, and to provide for shipment during the winter season, in competition with the all-rail routes, a system of car ferries was devised whereby a train of cars is transported bodily across the lake. This is a return to the old theory that the commercial importance of the city depends upon the movement of traffic directly across Lake Michigan.³⁷ The successful carrying out of the plan is asserted.³⁸ It remains to be seen how effective this scheme will be in restoring the former importance of the trade in wheat. The indications are that the time is past when such a plan could prove effective. The present trend is in favor of the northern markets in the spring wheat region, and of the markets south and west of Chicago in the winter wheat region. The same causes that brought about the decline of Milwaukee as a wheat market are in operation for the accomplishing of the same result for Chicago.³⁹ Increasing distance from the centers of wheat production, the increasing effectiveness of transportation by rail as compared with transportation by water, and the more favorable rates which the increasing importance of other markets enables them to secure, all combine to work against the wheat trade of both Milwaukee and Chicago.⁴⁰

³⁶ *Ibid.*

³⁷ See *Rep.* for 1891 for other improvements in transfer facilities.

³⁸ *Ibid.*, for 1905.

³⁹ Witness the constant complaint at Chicago of unfavorable conditions in the grain trade, and the recurring disputes between the Board of Trade and the railroads as to differentials.

⁴⁰ "It has been the unchangeable rule, where it was possible, that the grain crop of the grain belt should seek the nearest and therefore the cheapest route to market from the nearest inland lake or other water point. Aided by their superior advantages in this respect, Chicago and Milwaukee became the natural eastern terminals of the first railroads into this territory, and as naturally became the primary grain markets. . . . Changes have quite naturally occurred, however, and the growth of railroads, of cities, lake ports, banks, local mills and elevators, and other facilities which tend to disturb and shift the ordinary paths of commerce have diverted much of the grain trade of Chicago to other places more advantageously situated as to producer and consumer." *Rep. Ind. Com.* (1900), 4: 404-5.

CHAPTER VIII

THE GOVERNMENT LAND POLICY AND ITS RELATION
TO THE WHEAT INDUSTRY IN WISCONSIN

It is of course impossible in this connection to undertake any complete discussion of the public land policy. The attempt is made to merely point out the part it played in the development of the wheat industry in Wisconsin and to pass judgment from that point of view.

The question assumes two aspects: first, cheap lands and the pioneer settlers; and second, the land grant system to the railroads. Though these two phases of the public land policy were in part antagonistic,¹ ultimately the effect in each case was to stimulate the production of wheat. It would be difficult to find any great amount of opposition in Wisconsin in early days to the preemption and homestead laws. The policy of cheap lands met with universal favor. Even those who inveighed against the policy of adding acre to acre until the settler was land poor had no word of criticism for the public land policy which made that course possible. The careless and wasteful methods of cultivation did not go unrebuked; but no one pointed out that land ought to be made more costly because people are naturally wasteful of that which costs little. The part played by the factor of cheap land in the excessive and harmful extent to which wheat culture was carried was set forth plainly by more than one thoughtful person; but no one seriously thought of taking the position that the government ought to make it

¹ Sanborn, *Congressional Grants of Land in Aid of Railroads*. *Bulletin of the Univ. of Wis.*, No. 30, pp. 31, 45-7. Considerable opposition developed in Wisconsin at first to the land grant system.

more difficult to obtain land.² Land was desirable property to own and to get it as cheaply as possible was, like any other bargain, to be desired. The attitude of the people of Wisconsin toward cheap land at the beginning of the wheat period and for a number of years thereafter was the traditional attitude of the frontier—the attitude of the newer western states as opposed to that of the older eastern states.³ It was not until the farmers of Wisconsin themselves began to suffer in their turn from the competition of the cheaper and more fertile lands in the West that opposition developed to the policy of cheap lands.⁴ An insatiable land hunger prevented them from realizing the injurious effects of cheap land and extensive cultivation upon their own agriculture directly. A half century before wheat growing became important in Wisconsin, the close connection between cheap land, the culture of wheat, and bad methods of agriculture were set forth in reference to New York:⁵ “New York is at least half a century behind her neighbors in New England, New Jersey and Pennsylvania in point of improvement in agriculture and manufactures. Among other reasons for this deficiency, that of want of enterprise in the inhabitants is not the least. Indeed their local advantages have been such as that they have grown rich without enterprise. Besides lands have hitherto been cheap and farms of course large, and it requires much less ingenuity to raise 1,000 bushels of wheat upon

² See p. 26, however, in reference to the land limitation movement in Wisconsin.

³ The opposition of the older eastern states to a liberal land policy and the ardent advocacy of the same policy by the frontier states is a commonplace of American history. “The government of this country could not advance the interest of the state more effectually than to hold out still greater inducements to foreigners and others living in distant states, by giving all the disposable land in the state, free to actual settlers, charging only the bare expense of the survey and transfer.” Gregory, *Industrial Resources of Wis.*, p. 12. See also the *Mineral Point Democrat*, June 6, 1845, quoting from the *Washington Union*. See also Sanborn, *Congressional Grants of Land, etc.*, pp. 12, 17, 20, 27, 35, 38 ff. Compare the present hostile attitude in the West toward a more strict enforcement of our already liberal laws governing the disposal of the public domain.

⁴ *Trans. of State Agric. Soc.*, 1873-74, pp. 109, 429-31. See below, notes 41 and 43. See *Farmers' Inst. (Wis.) Bulletin* No. 2, p. 181.

⁵ Jedediah Morse, *American Geography*, [Elizabethtown, (N. J.) 1789,] p. 261. Compare Pat. Office Rep. *Agriculture*, 1858, pp. 213-20, article by Gustavus De Neveu, of Fond du Lac, Wis.

60 acres of land than to raise the same quantity upon 30 acres. So long, therefore, as the farmer in New York can have 60 acres of land to raise 1,000 bushels of wheat, he will never trouble himself to find out how he can raise the same quantity upon half the land. It is population alone that stamps a value upon lands and lays a foundation for high improvements in agriculture."

This description is characteristic of specialization in wheat growing on the frontier throughout the movement of the wheat area across the country from east to west, with the reservation that it describes an area in which the stage of serious soil exhaustion had not yet been reached. From an early period in the history of wheat growing within the present boundaries of the United States,⁶ the chief features in the early stages have been cheap, fertile land, sparse population, scanty capital, and large yields with the most primitive methods of cultivation. Then, later, with successive cropping to wheat, came soil exhaustion, declining yield,⁷ the necessity of more expensive methods of cultivation, higher land values consequent to an increasing population and to the improvements necessitated by an advancing standard of living,⁸ resulting ultimately in wheat growing becoming unprofitable and being discontinued in part at least, and being replaced by other crops and farm pursuits less costly of the increasingly expensive factor, land, and more dependent upon the application of the relatively cheaper factors, labor and capital.⁹ Wheat growing on the frontier not only requires a limited amount of labor and capital, but it requires only labor of a low degree of skill and capital of minimum efficiency.¹⁰ The all important factor is fertile land adapted

⁶ "It [wheat] was introduced into the Elizabeth Islands of Massachusetts in 1602, and in 1611 into Virginia. In 1718 it was brought into the valley of the Mississippi, and in 1746 flour was first shipped from the Wabash river to New Orleans." *Rep. of Com. of Agric.* (U. S.) for 1862, p. 66.

⁷ "The English colonies on the Pacific, where land is cheap, follow the exhaustive practice of the United States, rather than the restorative system of the mother country, and the result is shown in a yield of cereals not exceeding our own rate of production." *Rep. of Com. of Agric.* (U. S.) for 1868, p. 19.

⁸ See below, note 42.

⁹ See *Rep. of Com. of Agric.* (U. S.) for 1868, p. 18.

¹⁰ See below p. 170, note 42.

to its culture, and since it is a grain directly used for human subsistence and thus a cash crop, and since specialization in its culture implies a market and thus a sensitive relation to the phenomena of price, the value of the land becomes a factor of prime importance and the growing of wheat on cheap, fertile lands becomes a pursuit of extraordinary competitive strength not only in relation to other pursuits less adapted to that environment, but also in relation to wheat growing itself in a more advanced agriculture. In addition to other peculiarities and characteristics already pointed out which make wheat growing preëminently a frontier crop,¹¹ it may be worth while to emphasize more particularly a circumstance already noted,¹² which has increased the adaptability of wheat growing to cheap fertile land in the United States, viz: that the early wheat farmer was half speculator. He looked largely to a rise in the value of land for his profit and expected to dispose of his land when that rise in value came. In the meantime, the growing of wheat was not

¹¹ See above p. 23 ff. As compared with other grains, wheat has a high specific value, a low degree of perishability and may be handled with a high degree of facility both by hand and by machinery. It thus has an advantage over competing crops wherever the factor of transportation plays an important part as is true on the frontier. Further it is directly available for human consumption while other grains are in general incidental to the live stock industry and are thus available for human consumption only indirectly and through the agency of a more or less prolonged round of operations involving the intervention of considerable amounts of labor and capital, which are proverbially scarce on the frontier.

There was said to have been no market for oats or barley in Grant county in 1852 (See Pat. Office Rep., *Agriculture*, 1852-53, p. 327 ff.) Wheat was said to have been the principal article raised in Fond du Lac county in 1854 for export because other grains would hardly bear transportation to eastern markets. (*Ibid.*, 1854, p. 148 ff. See also Adams, *Commercial Geography*, 59, 60, 63.)

"Wheat is a convenient pioneer crop, and particularly spring wheat. It can be put into all ground one can have ready and he trusts to his opportunities in a later month to harvest." *Bulletin U. S. Dept. of Agric. Div. of Stat.*, No. 24. (Blodgett): *Relations of population and food products in the United States*, (1903) p. 32.

¹² See above p. 40 ff. Ritchie, *Industrial Resources of Wis.*, 172; see *Trans. of State Agric. Soc.*, 1886, p. 226, for the statement that of the two great sources of profit in farming (1) rise in the value of land and (2) profit on the production of farm crops,—the first had thus far been the chief source. This is probably a little over stated, however; see *Rep. of Ind. Com.* for 1900, 10: 789-90, for similar statement in reference to the early farmers of Dakota; see Register's Report, State Land Office, Oshkosh, Jan. 2, 1852. There was an increase of 100 per cent. in the value of farm lands in the surveyed district, in Minnesota, from 1850 to 1860.—*Rep. of Com. of Agric.* (U. S.) for 1867, p. 108.

only often profitable in itself, but it involved the minimum expenditure for permanent improvements. For this anticipated rise in land values and consequent speculation, the low price at which the public lands were disposed of, afforded abundant opportunity.

In 1790, the wheat country of the United States lay in Virginia, Maryland, Delaware, Pennsylvania, New Jersey, New York, and the westernmost parts of Connecticut, of the two Carolinas and perhaps of Georgia for home consumption.¹³ Captain Williamson¹⁴ stated a few years later that it had been found by repeated experience that when wheat was about one dollar per bushel, an acre of ground taken from a state of nature and well timbered would require with great economy fourteen dollars per acre to put into a crop of wheat or rye, including every expense. Forty acres of such ground near Geneva, N. Y., was depended upon to yield at least 1,000 bushels of wheat,¹⁵ and after deducting two-tenths or 200 bushels for reaping and threshing, a balance of 800 bushels was left to defray the expense and "as a profit for the value of the land used." The land was left in complete order for a second crop without further expense than the "trifling one of plowing and sowing." Thus, notwithstanding the expense of clearing in a "well timbered" region, the cultivation of wheat was found to return a high profit the first year.¹⁶ This was possible because of the minimum outlay for the cost of the land. Even in 1804, the price of the best unimproved lands in the Genessee country was commonly from \$2 to \$4 per acre, while a farm of 100 acres with 20 or 30 acres improved and having a house and barn sold for from \$6 to \$20 per acre.¹⁷ Methods of cultivation, as might be

¹³ Cox, Tenche, *A View of the United States*, Dublin, 1795, pp. 73-4.

¹⁴ *Documentary History of New York*, 2: 667 (1850).

¹⁵ The yield of wheat in the Genessee country about 1797 amounted to from 25 to 30 bushels per acre.—*Ibid.*

¹⁶ Attention has already been called to the extraordinary spread of the wheat area over the non-forested part of Wisconsin, and its slower conquest of the wooded portions. Much of Wisconsin was thus more favorable for frontier wheat growing than the famous wheat country of western New York. See above pp. 39-40.

¹⁷ *Doc. Hist. of N. Y.*, 2: 687.

expected, were far from being thorough.¹⁸ DeWitt Clinton in 1810 described an estate of 2,400 acres located eight miles from Geneva, where 8 acres produced 50 bushels of wheat each, while the average yield of that section was said to have been 30 bushels per acre, and the wheat the best produced in the state.¹⁹ Under similar conditions, the "internal lands" on the large rivers of New Hampshire were raising from 40 to 50 bushels of wheat per acre about 1820,²⁰ but in 1860 New England produced only eleven quarts of wheat per capita.²¹ At the former period a yield of 25 bushels per acre was said to be a fair estimate on the tract in Ohio extending from the Muskingum to the Scioto and Great Miami rivers.²² It was just about this time that improved means of transportation afforded access to this fertile region and Ohio was soon the center of the wheat producing area;²³ and yet in less than thirty years Ohio was held up before the farmers of Wisconsin as a striking illustration of over-specialization in wheat growing.²⁴ In 1845, the average yield of wheat per acre in eastern New York was but 8 bushels to the acre, and its cultivation had been almost abandoned.²⁵ In the Mohawk-Hudson district the yield of wheat for the same year was but $9\frac{3}{5}$ bushels per acre, and the crop was no longer profitable except for "family consumption."²⁶ The western district or northern half of the western part of the state was said to be unsurpassed for wheat growing, as to soil and climate.

¹⁸ "Grain is frequently put into the ground without ploughing, the ground being only broke with a heavy harrow, and often yields, with this cultivation upwards of twenty bushels of wheat per acre." *Ibid.*, 682. See also *Prairie Farmer*, 10: 172-73.

¹⁹ Campbell, *Life and Writings of DeWitt Clinton* (N. Y. 1849), 153.

²⁰ *Commercial Directory*, J. C. Kayser and Company, (Phila. 1823), 118.

²¹ *Rep. of Com. of Agric.* for the year 1868. (U. S.) p. 20. It is significant of changed conditions of production that in 1860 yields of 30 to 35 bushels of wheat per acre were reported in Massachusetts, but at a cost of from \$45 to \$55, of which from \$25 to \$30 had been expended for manure. Careful and liberal cultivation was also required. *Ibid.*, pp. 480-81.

²² *Commercial Directory*, J. C. Kayser & Co., 153.

²³ See *Rep. of Milwaukee Chamber of Com.* for 1871, p. 148.

²⁴ See above pp. 14, 20.

²⁵ Winden, Julien—*The Influence of the Erie Canal upon the Population along its Course*. Mss. Senior Thesis, Univ. of Wis., 1900. [Quoting from Emmons, *Natural History of New York*.]

²⁶ *Ibid.*; see also *Wis. Farmer*, 10: 337.

but the average yield had declined by 1845 to $15\frac{1}{2}$ bushels to the acre and this was to be regarded as the "spontaneous growth of the fields rather than the result of high cultivation."²⁷ It was pointed out in 1848 that land in this same region so treated as to yield 20 bushels per acre cost for cultivation \$11.25 per acre, or about $56\frac{1}{4}$ cents per bushel; and that it could be put down in Liverpool at a cost of 15 cents, or a total cost of 71 cents per bushel, where it came into competition with the English wheat which had cost \$1.10 per bushel.²⁸ This calculation reveals both the possibilities of the English market for the American wheat farmer in general and at the same time the superior advantages of the frontier wheat farmers on the cheap, fertile lands of Wisconsin over the older New York wheat region. Attention may be directed again to illustrations already given of the production of wheat at a low cost in the former state—including the original cost of the land—for the purpose of demonstrating both the smallness of the cost per bushel and the low proportion of the whole cost included in the original purchase of the land. In one of the above illustrations, the total cost per bushel, including the entire original cost of the land, was about 50 cents. The cost of the land amounted to but $12\frac{1}{2}$ per cent. of the total cost of purchasing the land and producing and marketing the wheat, and was exceeded 25 per cent. by the single item of "breaking," as well as equalled by the item of "harvesting and stacking." Exclusive of the cost of the land, the cost per bushel was about 44 cents.²⁹

In another case in Wisconsin, represented as typical, the entire cost of "buying and settling a farm of 160 acres, with a comfortable log house and 40 acres of prairie fenced with ditch" and incidentally "breaking" the 40 acres and raising thereon 1,000 bushels of wheat, amounted to only \$735, or at a cost of only $73\frac{1}{2}$ cents per bushel for the wheat, with a farm of 160 acres and a house thrown in. In this case, the cost of the land amounted to but 27 per cent. of the whole expenditure and was

²⁷ *Ibid.*

²⁸ *Hunt's Mer. Mag.*, 22: 323.

²⁹ See above p. 35, note 82 (b). In the other case, the analogous cost was about 30 cents per bushel. See *Ibid.*, note 82 (a).

exceeded 40 per cent. by the combined cost of fencing and breaking only one-fourth of the land. Inspection of the itemized statement shows that to raise the same amount the second year, which was, on the average, possible,³⁰ would require less than one-third the outlay, omitting the cost of the land, of the house, of the fencing, and at least one-half the cost for plowing, which in this case is above the average:

"Cost of 160 acres of land	\$200.00
House,	80.00
Fencing,	160.00
Ploughing 40 acres,	120.00
Seed for sowing,	25.00
Sowing and harrowing,	50.00
Total	\$635.00

Crop, 25 bushels per acre, 1,000 bushels	\$500.00
Deduct for harvesting, markets, etc.,	100.00

Leaves the net proceeds, \$400.00

Deduct (\$400) from \$635 leaves balance of .. \$235.00."³¹

The yield in these instances was not extraordinary. Much higher yields were often obtained.³² The price received for the

³⁰ See Pat. Office Rep. *Agriculture*, 1850-51, p. 8.

³¹ Hazard, *United States Com. and Stat. Reg.*, 4: 69, (1841) quoted from the *Southport*, (Wis.) *Telegraph*. See also *Wis. Farmer*, 1: 44.

See *Trans. Amer. Inst.*, 1858, p. 100 for another estimate for a more advanced stage in the occupation of land in Wisconsin, where the total cost of putting 120 acres to wheat, including the cost of the "raw land" at \$5 per acre was \$1,362. The proceeds including the 120 acres of farm land, now "improved" and worth \$10 per acre, amounted to \$2,370. Estimating, more properly, the raw land lower and the improved land higher the real profits were calculated to amount to fully \$1,600.

See Ellsworth—*Valley of the Upper Wabash*, 1838, pp. 58-9 for an entirely analogous estimate for Indiana in 1838.

³² One man raised 3,950 bushels of wheat on 100 acres near Green Lake, about 1842. The following year he raised 3,650 bushels on the same land at a cost of less than 20 cents per bushel. The wheat was cut with a cradle and threshed at a cost of 3 cents per bushel. After the first two years, however, he never succeeded in raising any wheat at a profit. *Trans. of State Agric. Soc.*, 1879-80, pp. 220-22.

wheat was also low, when compared with that which stimulated wheat growing in the state shortly after the introduction of railroads.³³ Nor were the crude methods of cultivation that were incidental to the growing of wheat on cheap lands elsewhere wanting in Wisconsin.³⁴ After the first breaking of the land plowing was often very shallow, or even dispensed with entirely.³⁵ Implements of the most primitive character were often used.³⁶ The same fields were in some cases cultivated continuously to wheat for a generation or more.³⁷ Methods of rotation if followed at all were often imperfect³⁸ and no effort was made to return to the soil the elements withdrawn from it and which made for available fertility.³⁹ In short, nature did much, and man, little.

How this system of wheat growing had by 1850 wrought out its normal, disastrous results over the area of which it had taken possession in Wisconsin at that time has been already described; and it has been shown how a rise in the price of wheat and the introduction of improved means of transportation revived that system and spread it with extraordinary rapidity over the remaining available wheat lands of the state, to repeat on a scale many fold greater its course of exploitation and incipient ruin. "But westward the star of grain growing takes its way."⁴⁰ The same causes that had diminished the succes-

³³ See above p. 46, note 38.

³⁴ See *Hist. of Crawford County, Wis.* (Union Publ. Co., 1884), pp. 409-10. See *Rep. of Com. of Agric.* (U. S.) for 1868, p. 19. Also *Trans. of State Agric. Soc.*, 1871, pp. 241 ff.

³⁵ See above p. 48.

³⁶ "I see men every day who say they wish they could raise wheat as they did 25 or 30 years ago, turn the sod over and shake on the seed. I recollect of sowing wheat and raising 30 bushels to the acre, and harrowed it with two pieces of rail with wooden teeth." *Trans. of State Agric. Soc.*, 1875-76, p. 429.

³⁷ *Ibid.*, pp. 305 and 431. *State Ann. Rep. Wis. Dairymen's Association*, 104.

³⁸ On new soil in Fond du Lac county, about 1850, farmers usually raised two or three crops of wheat in succession and then alternated with oats or maize or fallowed with weeds.—*Pat. Office Rep., Agriculture*, 1852-53, p. 334.

³⁹ The statement is a common one that the stables were often moved in order to avoid the task of clearing away the barnyard manure. *Trans. of State Agric. Soc.*, 1853, p. 53; 1860, p. 75; 1861-68, p. 32; 1870, p. 456. Also *Formers' Inst. (Wis.) Bulletin*, No. 5, p. 45.

⁴⁰ The *New York Public*, quoted in the *Northwestern Miller*, April 5, 1878. Also Jan. 4, 1878, Supplement.

"What were once the great wheat producing States of the country are becoming less and less so, each succeeding year. The uncertainty of the crop discourages its cultivation in those States and the growing demand for shipment

sive areas farther east and had brought half of Wisconsin under the sway of that grain now operated in turn to almost drive wheat growing beyond the confines of the state. The cheap, fertile lands of Minnesota and Dakota became the new sphere of the operations of the wheat grower, and the land-grant railroad made his operations possible.⁴¹

In the wake of the disappearing wheat area in Wisconsin there reappeared in an acute form the depressing conditions of the period of 1850, and wheat growing became unprofitable on land that had risen in value⁴² while its capacity to produce wheat had in general either declined or was neutralized by the

to western Europe must be supplied from other sources. I venture the prediction that the wheat granary of this continent will yet be found in the valley of the Red River and Saskatchewan." Governor Jayne's *Message*, Dakota Territory, 1862.

"The progress of wheat growing westward is a significant feature of our agriculture. In nine years since 1859 it has been out of all proportion to the increase of population in the same section. West of the Mississippi 1859, the quantity harvested was 25,000,000 bushels; in 1867 it had increased to 65,000,000 bushels; and in 1868 the product was 70,000,000 bushels. Nine years ago the proportion produced was but 14 per cent; now it is 30 per cent. of the total product." *Rep. of the Com. of Agric.* (U. S.) for 1868, p. 17.

"He (the pioneer wheat farmer) knows there is danger of reducing the productive value of his land, but its original cost was an insignificant fraction of its intrinsic value, which is more than repaid by the net proceeds of a single crop. He cares little for a small diminution of productive capacity while he can fence and stock his farm, and place money in bank, from the sale of successive crops of wheat, and then sell the naked land for tenfold its original cost. Immediate returns with the least labor and capital, are the objects of the pioneer. As an expedient, for a poor man, the present practice may be tolerated; as a regular system of farm management, it is reprehensible and ruinous. It will doubtless continue in vogue till our virgin wheat lands are run over by pioneers, who will ultimately be succeeded by scientific farmers who will practice rotation, draining, irrigation, in certain sections, and fertilization from home resources, when the yield will be greatly increased and crops will be surer.

"The relative area of wheat must therefore continue its decrease eastward, and its increase westward, till our agriculture changes from its chrysalis state to its development as a complete system." *Ibid.*, 18.

⁴¹ *Rep. of the Com. of Agric.* (U. S.) for 1868, p. 16; see above p. 89 ff.

"The grand land craze caused by the immense yield of wheat in Minnesota, according to the *Pioneer Press*, does not abate, but on the contrary increases daily. Parties went out on Friday over the Northern Pacific, the St. Paul and Pacific, and the Sioux City roads to hunt for farms. People appear to be coming from all parts of the Union to get a slice of Minnesota lands." *North-western Miller*, Nov. 9, 1877.

⁴² This rise in the value of land was due to a complex of causes. In part it represented the profitableness of wheat growing at an earlier period, which had been capitalized—and in some cases over-capitalized as a result of speculative activity. In large measure it represented the cost of fixed improve-

competition of other farm pursuits better adapted to the new conditions. A more general recognition of the evils of a too extensive method of cultivation and of the tying up of capital in an undue amount of land was accompanied by a less favorable attitude toward the government land policy in general when the farmers of Wisconsin themselves began to suffer from the competition of these new and fertile areas.⁴³ When some of these

ments—better houses, better barns, drainage, fences—and those numberless conveniences which people are willing to forego while taking up land on the frontier but which come to be considered indispensable with an advancing standard of living and which are yet of minimum utility in the growing of wheat. (See *Trans. of State Agric. Soc.*, 1853, pp. 151-52.) Of like character are those advantages which attach to older communities for residence purposes—opportunities for the amenities of life—society, culture, education—which are in large measure incidental to the growth of urban life, and which are of much more significance in the rise of land values than is usually recognized. [Lands in Rock county in 1870 were said to be worth from \$10 to \$100 per acre, and were sought for "not so much by emigrants seeking cheap lands as by those desiring beautiful homes where they may at once enjoy all the comforts and conveniences to be found in the older and more wealthy portions of the country." *Trans. of State Agric. Soc.*, 1870, p. 456.] The growth of cities, the pressure of population and the exhaustion of cheap government land within the state were other causes. The construction of railroads was another cause, if it can be considered separate from the other causes mentioned. The more rapid fall in interest rates on capital invested in land was another cause of higher land values. See *History of Crawford County, Wis.* (Union Publ. Co., 1884.) 409-10.

⁴³ In 1870 in Fond du Lac county good, improved farms were worth \$45 to \$75 per acre—\$75 to \$100 near cities—and wild lands \$10 to \$45. It was said that there had been great changes in the system of farming recently; that farmers had begun to realize the folly of wearing out their land raising wheat at an average cost of \$1 and selling it for 85 cents; that the time "was passed" when wheat could be raised for 50 cents at a large profit; that only new and cheap lands could do this and that other pursuits were found more profitable. *Trans. of State Agric. Soc.*, p. 407 ff. [The average cash valuation of farms in Fond du Lac county had increased from \$30.19 in 1859 to \$48.04 in 1869. See Table XXIII.] See speech of Pres. West, of Mil. Ch. of Com., Apr. 8, 1871, in *Rep. of Milwaukee Chamber of Com.* for 1871, p. 144.

"We are menaced on the north and west with a large area of rich, cheap land that will soon send its products into our markets at prices far below the cost of production here, at all consistent with the present price of Wisconsin farms. Just now we are protected by what we please to call railroad extortions on freights: but when forty-five cent wheat from Dakota and twenty-five dollar four-year-old steers from Kansas, are freighted to Chicago as cheaply as they now are from Chicago to New York, we shall have to adopt some more productive farming than that now prevailing among the majority of farmers." *Trans. of State Agric. Soc.*, 1879-80, p. 197.

"Changed conditions in soil and climate, deterioration of the soil and last and greatest the competition of the new and great wheat fields of the far northwest, where lands are cheap and organized labor on a large scale reduces the cost of production to the lowest figure, have all combined to render the production of small grain alone a discouraging task if not a ruinous failure." *Ibid.*, 1881-82, p. 181.

same farmers, disposing of their own land, migrated to the new wheat areas in Minnesota and Dakota, the parallel between Wisconsin and the older wheat areas to the east was complete.⁴⁴

It was asserted in 1857 that a revulsion in commercial affairs, even if it came, could not affect the farmers of Wisconsin, who had purchased lands at \$1.50 to \$2 per acre, inasmuch as the first crop generally paid for both farm and improvements.⁴⁵ But the price of land under those circumstances does not remain at that figure, and, as a result of the wild speculation that followed, land rose enormously in value within a brief period. The cost of labor and of materials also rose greatly and it thus happened that with a declining market the wheat crop of 1857 cost from 25 cents to 30 cents per bushel more than was received for it,⁴⁶ and the revulsion came notwithstanding. So great was the reaction caused by the depression, which was emphasized by unfavorable crops for two or three years, that it was seriously questioned whether, after all, the Northwest was in the real wheat belt.⁴⁷

The next period of marked general depression occurred during the years that followed the Civil War⁴⁸ when conditions were again changing from a speculative to a more stable basis. It was asserted that the time had come for important changes in

⁴⁴ See *Northwestern Miller*, for April 18, 1879, relative to the "steady exodus" from the eastern part of Minnesota and from Wisconsin and other states to the new region to the north and west. The statement is also made that the exports of wheat from that region had already materially "changed the grain markets of the old world."

This migration was not without its advantages for the agriculture of the state as those who went were usually those who had learned to raise nothing but wheat and who were unable to adapt themselves to the new conditions, but went west again "to begin anew their frontier farming upon virgin soil." They were then replaced by immigrants accustomed to better methods of culture. *Hist. of Crawford County, Wis.* (Union Publ. Co., 1884) 409-10. See *Trans. of State Agric. Soc.*, 1871, pp. 248-44; *Northwestern Miller*, Nov. 8, 1878; *Tenth Ann. Rep. Wis. Dairymen's Assoc.*, 65.

⁴⁵ Ritchie, *Wisconsin and Her Resources*, 174.

⁴⁶ *Rep. of Milwaukee Chamber of Com.* for 1858, p. 9. The effect of this rise in the value of land upon the cost of producing wheat was due to the fact that much land changed hands at these fancy prices. Had the land remained in the hands of the original owners the increase in its value would not have directly increased the cost of producing the wheat. See Hibbard, *Hist. of Agric. in Dane Co.*, pp. 130, 195-96.

⁴⁷ *Wis. Farmer*, 13: 33-5.

⁴⁸ See above p. 71 ff.

the La Crosse valley and that too much time, labor, and money were expended in raising wheat unless a price of \$1.75 to \$2 per bushel could be depended on.⁴⁹

In Jefferson county, it was said in 1870 in reference to the "hard times" that though the crops might be as abundant as in more prosperous years yet the farmers in very few instances had anything left after paying the expenses of production and living and in many instances did not realize enough on their crops to meet expenses.⁵⁰ Land is said to have sold at \$20 per acre in that county a little later,⁵¹ and it is asserted that the farms were mortgaged up to 60 per cent. of their value.⁵² The statement has also been made that "the farms of Wisconsin were all blanketed with mortgages" about the same time.⁵³ The reason given for this depression was the decline in the yield of wheat. This may be accepted as valid in part, but the statistics in reference to yield per acre do not indicate so extreme a decline as is claimed, either in Jefferson county or in the state as a whole.⁵⁴ The great fall in the price of wheat about that time,⁵⁵ coupled with the high cost of production⁵⁶ and the competition—just then becoming serious⁵⁷—of the new wheat areas to the west, would seem to indicate that inflated land values played no small part in making the wheat crop unprofitable, and that the phenomena of depression represented in part a

⁴⁹ *Sparta Herald* (Monroe Co.) May 4 and 18, 1869.

⁵⁰ *Jefferson Banner*, July 13, 1870. The blame was laid upon the tariff.

⁵¹ *Trans. of State Agric. Soc.*, 1895, p. 265. This figure can hardly be accepted as indicating the value of land generally in that county at that time. See Table XXIII.

⁵² *Ibid.*

⁵³ *Ibid.*, 1888, p. 180.

⁵⁴ The yield of Jefferson county was said to have been reduced to 8 bushels per acre. This seems improbable, as Jefferson county in 1869 shows the highest per capita yield of any census period. Further the yield per acre in that county for the year 1869 calculated on an acreage of 50,000 acres (very considerably above the acreage for 1877) amounts to more than 12 bushels per acre. See also *Jefferson Banner*, Aug. 4, 1869; July 13 and Aug. 24, 1870.

Inasmuch as the per capita yield for the whole state was also at the maximum in 1869, the statement of a greatly diminished yield for the whole state at that time can scarcely be accepted.

⁵⁵ See Tables VIII-X.

⁵⁶ See above note 48.

⁵⁷ See above pp. 4, 89-90, 129 ff.

readjustment to more normal values.⁵⁸ This is borne out by referring to the figures for the average cash valuations of farms in the state in 1870.⁵⁹ A majority of the counties that were important in the production of wheat in 1869 show declines in the cash valuation of land for the decade 1869-1879. That this decline in land values may have been due to depression in the wheat industry does not invalidate the hypothesis that land values were too high to raise wheat, but serves to strengthen it. Neither would it be valid to assume that with the decline in the value of land the growing of wheat might have been expected to regain the ground that had been lost. There was naturally a tendency to introduce other farm pursuits better adapted to the changed conditions and which might be expected to produce a larger income even than wheat had formerly done. The higher standard of living demanded an increased income and not merely the same income that had been formerly enjoyed.⁶⁰ The unprofitableness of the wheat crop proved a favorable opportunity for experiment in a more diversified agriculture, and, this experiment proving successful, the fall in the value of land was checked and did not proceed far enough to place wheat growing on the same competitive level in Wisconsin as on the cheap lands of Minnesota and Dakota. So far from that, land values, responding to the profitableness of the new pursuits, moved up to a point higher than before and wheat growing in Wisconsin, was as a result not only not able to compete with the growing of wheat on the cheaper lands of Minnesota and Dakota, but was also unable to compete with the more profitable farm pursuits at home. It is not surprising then that under these circumstances the growing of wheat continued to

⁵⁸ It was said that in 1872 some thought 75 cents per bushel for wheat would pay; others that not less than \$1.00 per bushel could be made to pay. One man was of the opinion that to pay all expenses and 7 per cent. interest on the value of the land required \$15 per acre and that a crop of 15 bushels to the acre accordingly brought no profit. In 1872 with a yield of 18 bushels per acre there was a profit of \$3 per acre. In ordinary years, however, with a yield of 14 bushels per acre, there was a loss on the investment, though the majority of the farmers did not keep books and went on at a loss—not realizing it. Martin, *History of the Grange Movement*, 385-86.

⁵⁹ See Table XXIII.

⁶⁰ See above p. 71, note 1.

decline in Wisconsin. This substitution of more profitable farm pursuits for wheat growing and the resulting upward tendency in land values was evident in many of the counties by 1880 though much more marked during the succeeding decades.⁶¹ Green, Jefferson, Rock, Sheboygan, and Walworth counties afford illustrations.⁶² That the conditions in reference to wheat growing were yet on the whole dominant in respect to the movement of land values is proved by the decrease in the cash valuation of land which accompanied the great falling off in the production of wheat during the decade 1869–1879 in Columbia, Dane, Dodge, Grant, Green Lake, Iowa, Lafayette, and Vernon counties and the increase in the value of land which accompanied the increased importance of wheat growing in Door, Kewaunee, Manitowoc, Ozaukee, and Washington counties, as well as in some of the western counties.⁶³

During the following two decades, however, marked declines in the production of wheat, accompanied by the substitution of other farm pursuits, have gone hand in hand with greatly increased land values, while wheat growing has persisted longest in those counties where land values have been, in general, moderate.⁶⁴

The effect of the land grant system upon the introduction of railroads and thus upon the spread of wheat growing in Wisconsin need not detain us long in this connection. It has been seen

⁶¹ See Table XXIII.

⁶² *Ibid.* See also *Bulletin of the Agric. Exper. Stat., Univ. of Wis.*, No. 60, p. 17 for the early development of the cheese industry in Sheboygan and Jefferson counties. Recall the growth of tobacco growing in Rock county.

⁶³ Compare Tables III and XXIII. Manitowoc, Ozaukee, and Washington counties present exceptions to the general tendency of wheat growing to decline on high priced land. It is asserted that the culture of wheat is best adapted to putting the heavy red clay soils of the eastern counties into cultivable condition. This may afford a partial explanation.

See Martin, *History of the Grange Movement*, 333, (1873) for the statement that the effect of a change in price of one cent per 100 lbs. of wheat amounted to \$1.16 per acre upon the value of land in Wisconsin.

⁶⁴ Compare again Tables III and XXIII, and note the comparatively low cash valuations in Buffalo, St. Croix, Polk, Pierce, Kewaunee, Door, Trempealeau, Pepin, Shawano, Jackson, and Monroe counties. Calumet, Manitowoc, and Brown present exceptions, but the higher average in the cash values of land in these counties may be due to the influence of the cities in this section upon the value of the lands in their immediate neighborhood.

already that the first effect of the introduction of railroads was toward more excessive specialization in the culture of wheat as well as toward its rapid spread into regions previously inaccessible.⁶⁵ It is here proposed merely to point out the connection between the existence of a great body of cheap land which was disposable at a nominal price, and the system of land grants by which the construction of railroads and other internal improvements was stimulated. No one can follow the history of internal improvements in the United States and not be impressed with the significance of this connection. One argument advanced on the part of the government was the familiar one that internal improvements would increase the value of the public lands as a whole and hence that it was desirable to encourage internal improvements by granting a portion of the public lands in aid of the various projects. The settlers who took up the lands on the frontier had on their part a double object in the promotion of railroads. In the first place they desired an outlet for their surplus product, so soon as they had a surplus product, and in the second place as land speculators they favored internal improvements for the increment of value which would thereby be added to their land. As we have already seen,⁶⁶ the break-down of the home market in Wisconsin led to the abandonment, by the early settlers of the state, of their hostility toward railroads on account of the supposed monopolistic features connected therewith, together with whatever of opposition they may have had to the system of land grants on the ground that it removed a portion of the public lands from settlement as well as raised the price of the desirable lands.⁶⁷ Having thrown their scruples to the winds, the people of Wisconsin were thereupon as eager for the construction of railroads as they had been hostile to them before. On the same principle as that advocated by those who determined the public

⁶⁵ See above p. 40 ff.; also below p. 140 ff.

⁶⁶ See above pp. 17-19, 35.

⁶⁷ See Sanborn, *Congressional Grants of Land in Aid of Railroads*, pp. 31, 37, 46-7. It seems clear that the effect of the railroads in opening the new areas to cultivation, and in adding to the value of the lands of the settlers themselves far outweighed these opposing tendencies. See, however, below p. 144.

land policy, they were willing to aid the railroads for the sake of the effect upon the value of their own lands. Further, in addition to their rôle as speculators in land, they now essayed to speculate in railroad stocks. In the latter capacity they soon came to grief and the effect was to diminish both their ability and their inclination to make permanent improvements or to adopt an improved system of farming and get out of the rut of wheat culture, which they found peculiarly suited to their situation. Cheap land was thus a main factor in the introduction of railroads into Wisconsin, which in turn reacted favorably upon the cultivation of that same land to wheat.

It is not argued that the policy of cheap lands led to wheat growing, but that it led to the excessive cultivation of wheat; nor that the extension of that policy to the new lands beyond Wisconsin, alone led to the decline of wheat growing within that state, but that that policy was the main factor in both cases in respect to Wisconsin just as it had been in respect to the former wheat areas to the east of that state, and as it has been in the case of the newer areas to the west.⁶⁸ If it be argued that the policy provided homes for the homeless and lands for the landless, it may be answered that there will still be the homeless and the landless.⁶⁹ If it gave many in the older portions of the country a new start in life,⁷⁰ it may be

⁶⁸ For description of how the same conditions have been or are being repeated in Minnesota and the Dakotas see the following: C. W. Thompson, *The Movement of Wheat Growing. A Study of a Leading State*, in *Quart. Journ. Econom.* 18: 570; Hon. C. C. Andrews, *Conditions and Needs of Spring Wheat Culture in the Northwest* in *Special Report of the Dep. of Agric.* (U. S.), Vol. IV, No. 40 (1882); Hagerty, *Statist. and Polit. Abstract of the Territory of Dakota*, (1889) p. 72 ff.; *Wheat Raising in the Red River Valley in Minn.* in *Hist. Soc. Coll.*, 10: 1-33; J. A. Wheelock, *Second Ann. Rep. of Com. of Statist.* (Minn.) for 1860 and 1861, pp. 56, 66, 71, et al.; *First Ann. Rep. of the Assist. Sec'y of State, Minn.*, Dec. 30, 1869, p. 10 ff.; *Report of the Second Ann. Farmers' Inst.* at Le Seur, Minn. Mch. 9-11, 1887; *Second Ann. Report of Com. of Stat.* (Minn.), Jan., 1871, p. 11 ff.; *Northwestern Miller*, Jan. 4, Jan. 26, Feb. 1, May 3, July 5, Sept. 6, Oct. 4, Nov. 8, 1878; Jan. 24, May 30, June 6, 1879. See various county histories of Minnesota, especially by Neill. See also *Munsey's* 25: 17-30; *Nineteenth Century*, 6: 10. See *Rep. of Ind. Com.*, (1900) Vol. X., Index.

⁶⁹ *Rep. of Ind. Com.* for 1900, 10: 10-11, testimony of Assist. Sec. U. S. Dep. of Agric., Joseph H. Brigham.

⁷⁰ *Ibid.*, 171, testimony of Le Grand Powers, Chief of Div. of Agric. U. S. Census.

answered that it injured those who remained behind and in a vicious circle of reaction drove them, too, to sacrifice their own lands and seek the cheaper and more fertile ones farther west.¹¹ It accentuated the natural tendency to that undesirable economic instability which always characterizes the frontier region. If justified at all, it must be justified on other than on economic grounds, and it may be questioned whether it can be justified on any grounds. For fields that were slovenly and impoverished and that ran to weeds, for homes sold under foreclosure, for class antagonisms begotten of financial distress, for lives, narrow and unlovely, born of the shiftless monotony of continuous cropping to wheat—for this the prodigal system of cheap government land was in large measure responsible.

¹¹ *Ibid.*, 37, 86, 175 ff. 266, 366 et al. (See index).

CHAPTER IX

RELATIONS BETWEEN THE WHEAT GROWER AND
THE COMMON CARRIER

It has been shown that the railroad came just in time in Wisconsin to prevent the cultivation of wheat from being relegated to a rational and scientific coördination with the growing of other farm crops and with other farm pursuits. The early distrust of railroads by the farmers and the slow acceptance by the latter of the belief in their apparent necessity has been referred to, and attention was called to the extremes to which the farmers went in order to secure the construction of railroads when once considered necessary and advantageous, and to the bright anticipations that some at least held in respect to them.¹ It remains to follow the subsequent relations between the wheat grower and the common carrier.

The farmer in Wisconsin was interested in the railroads just as he was interested in immigration,—because both furnished him a market and both tended to increase the value of his land. Cheap land meant the possibility of great rise in the value of land, provided railroads gave access to a market and provided immigration could be kept up. The rise that actually occurred was in part speculative and in part a legitimate and natural

¹ See above p. 40 ff. "When the railroad penetrates our borders and gives us at all times access to the Atlantic Seaboard, what more can the farmer ask or need but well directed industry to crown his efforts." Thomas T. Whittlesby, at the meeting of the Dane Co. Agricultural Society, 1852. *Trans. of State Agric. Soc.*, 1852, p. 104.

See Tuttle, *History of Wisconsin*, 1875, p. 270.

increase of values.³ The prediction of the chief engineer of the Milwaukee and Mississippi railroad⁴ that "every acre of land which comes within the influence of this road will be doubled and trebled in value as soon as it is completed" was not far from being realized. Wherever the railroad reached or wherever there was the possibility of its reaching, the effects were magical. The southern part of the state was the first to experience the buoyant effect of the new order of things. Good crops and high prices for farm produce combined with the influence of the railroad to bring about the "good time."⁵ As railroads were rapidly pushed into other portions of the state, depression was there, too, succeeded by prosperity and stagnation gave way to the most active and feverish speculation.⁶ The land booms of a hundred other American communities were repeated in various parts of Wisconsin, with all their extravagant accompaniments.⁶ Confidence reigned supreme and the

³ See Gregory, *Industrial Resources of Wisconsin*, pp. 236-37, for an estimate of the comparative value of farm crops to the farmer when marketed via common road and via railroad. (See Hibbard, p. 140, note 27.) See also the quotation in the *Milwaukee Sentinel* for September 27, 1850, from the *Madison Argus* to the effect that the extension of the Milwaukee and Mississippi railroad into Dane county would add \$2.60 value to every acre in the county.

⁴ Report, June 1, 1852. See Periam, *The Groundswell*, p. 446, for the statement (by J. W. Midgeley, President's Secretary, North-Western Ry.) that carefully prepared statistics showed that every additional mile of railroad to 100,000 acres of farm land yielded an average increase of \$1.00 per acre, in the West. The increase in the value of farm lands in Wisconsin during the decade 1850-1860 is given as \$7.02 per acre. Compare with Table XXIII.

⁵ "It is but comparatively a short time since Rock county was a wild and uncultivated waste. Now it is teeming with civilization and refinement. But when the Chicago, St. Paul and Fond du Lac on the north and the Southern Wisconsin on the west shall be completed together with other public improvements . . . its latent resources will begin to be developed." Annual address before the Rock County Agricultural Society and Mechanic's Institute, by Colonel Z. P. Burdick, in *Trans. of State Agric. Soc.*, 1854, '55, '56, '57, pp. 151-60. See above p. 40, note 9.

⁶ "The completion of the Milwaukee and Mississippi railroad to this point (Whitewater) in 1852 made a perfect revolution, in not only the village, but in the surrounding country also; nor did the change cease when the road was built beyond us." *Governor's Message and Accompanying Documents*, 1857, p. 427-34.

⁷ See above p. 45. "I purchased land in 1856 near Ripon for \$1.25 per acre. In 1857 the railroad was completed to Ripon and in the fall of the year I sold the same land for \$32.50 per acre. That was because we had the means of sending our produce to market." *Trans. of State Agric. Soc.*, 1879-80, p. 222.

possibility even of a reaction, in Wisconsin, at least, was scouted.⁷ Many a farm was sowed to wheat not merely because it was profitable, but because men bought land to sell again at an advance and the securing of a crop of wheat involved no outlay of capital for permanent improvements.⁸ Instability thus set its stamp on the economic development of Wisconsin, and the subsidized railroad was one of its chief agents.

The effect of farm mortgages in stimulating the construction of railroads in Wisconsin is very hard to estimate. The entire amount was relatively small when compared with the total cost of the railroads.⁹ But it must be remembered that these mortgages were given at the inception of the railroads and would thus have a greater influence than the absolute amount might seem to indicate. They were largely confined, too, to certain limited sections of the state and to certain railroads. There can be no doubt that the effect was very great in making these early railway enterprises tangible propositions, in actually setting the construction on foot. If it happened that in many cases the original promoters failed of success and the farmers who had given their mortgages in return for stock in the railroad found

⁷ Ritchie, *Wisconsin and its Resources*, 172, 174.

⁸ See above p. 34, note 9; see also p. 46.

⁹ See Meyer, *Early Railroad Legislation in Wisconsin*, in *Wis. Hist. Col.*, 14: 361, 362. "The farm mortgages in 1874 amounted to about one per cent. of the total valuation . . . by the State Board in 1875."

See *Hist. of Fond du Lac County* (West. Hist. Co., 1880), 185, where an estimate of \$4,079,433 is given for total farm mortgages; Cary, *Organization and History of C. M. and St. P. R. R.*, 17; also, *Second Ann. Rep. of the La-Crosse and Milwaukee R. R.*, Dec. 31, 1853; also *Ibid.* for 1854 and 1857; *First Ann. Rep. of Mil., Waukesha and Miss. R. R. Co.*, Dec. 31, 1849. Over 2,000 farmers and other citizens residing along the Milwaukee and Mississippi railroad had contributed over \$1,000,000 to that road in bonds and mortgages by 1857. *Memorial* of that Company to the Legislature against the extension of the Madison and Watertown R. R. to the Mississippi river., Feb. 21, 1867.

The farmers of Ozaukee county made private subscriptions of \$200,000 to the Milwaukee and Superior railroad. *Ann. Rep.* for 1856. For an estimate by counties, of the aid extended to railroads in bonds, farm mortgages, etc., in Wisconsin, see *Wisconsin Miscel. Pamph.* Vol. 15, No. 6, (Lib. of Wis. Hist. Soc.), (From the *Madison Democrat*.) See *Hist. of Washington and Ozaukee Counties* (West. Hist. Co., Chicago: 1881), 356; *Hist. of Waukesha County*, (West. Hist. Co., Chicago: 1880), 389; also Holford, *Hist. of Grant Co.*, (1900) 72; *Hist. of Green Co.* (Union Publ. Co., Springfield, Ill., 1884), p. 885 ff for history of farm mortgages and of the extension of the railroad from Janesville to Monroe; Ellis, *Hist. of Portage Co.*, read at Centennial Celebration at Steven's Point, July 4, 1876. See various other county histories.

that stock and the guarantee of the company to pay the interest on their mortgages equally worthless, the enterprises, nevertheless, often went into the hands of eastern capitalists who carried the railroads to completion. The scheme would certainly have done justice to the times of John Law,¹⁰ and brought its full complement of ruin and disaster, besides being a fruitful source of irritation between the farmers and the railroads.¹¹

¹⁰"The *modus operandi* was for the farmer to subscribe to the stock, give his note for the amount of his subscription, payable to the order of the company, secured by a mortgage on his farm bearing from 8 per cent. to 10 per cent. interest. The company then attached to said note and mortgage its bond guaranteeing the payment of the note and mortgage, principal and interest, and in and by the terms of the bond, the note and mortgage were assigned to the holder, and such note, mortgage and bond were sold in the market together as one security, and not separately, the note not endorsed. An agreement was also given to the farmer by which the company agreed to pay the interest on the note until it became due, in consideration of which the farmer made an assignment of his prospective dividends on the stock so subscribed, for sufficient to pay said interest.

"It is needless to say that this stock proved worthless and that the farmers were compelled to pay their mortgages and in very many cases lost their farms." Cary, *Organization and History of the C. M. and St. P. R. R.*, 17-18. See *Ibid.*, 13, 201, 328 ff.

"Many still living have a recollection of the ease with which they could mortgage their homes to aid that enterprise. Many who had so mortgaged their farms will remember the hardships and difficulties encountered in redeeming their homes." *Hist. of Dodge Co.*, (West. Hist. Co., 1880), 521.

"A careful estimate of the amount of mortgages taken in Wisconsin discloses the fact that over \$2,000,000 were raised and put into railroads by farmers' mortgages for which these men never got a cent." *Chicago Times*, Aug. 7, 1875. See also *Monroe Sentinel*, Sept. 6, 1854.

¹¹See Martin, *History of the Grange Movement.*, 377-78. See *Rep. of Select. Committee* appointed under Resolution No. 128, Assembly, to investigate the affairs of the Milwaukee and Superior R. R., May 12, 1858. Fraud was reported in connection with that Company and the Fond du Lac Air Line Company, in reference to the farm mortgages given by German farmers. Special action of the Legislature was recommended in order to prevent the fraud from being consummated, and the farmers from losing their land.

See *Letter* (Oct. 3, 1861) from the "Farmers' General Home League," Janesville, Wis., in reference to farm mortgages, and the *Answers* of the Mil. and Prairie du Chien Ry. Co., and of the trustees of the creditors of the Mil. and Miss. Ry. Co. (Pamphlet, Lib. Wis. State Hist. Soc.) The farmers had organized to prevent the foreclosure of the mortgages. See *Reply to the Address of the Farmers' General Home League*, of the Mil. and Miss. R. R. Co. (Pamphlet, Milwaukee, 1861.) See Sanborn, *Congressional Grants of Land to aid of Railways*, 99-100, in reference to the Wisconsin Farm Mortgage Land Company, created by act of legislature in 1868 to manage "the lands patented to the state on account of the line between Portage and Tomah, . . . in the interest of the farmers along the line who had subscribed for stock in the La Crosse and Milwaukee Company and mortgaged their land as security." See Sec'y of State's *Rep.* for 1877, pp. 60, 61, 63. See speech of Hon. Geo. B. Smith, before the Southern Wis. Agric. Soc., Janesville, Oct. 2, 1874, in *Trans. of State Agric. Soc.*, 1874-75, pp. 480-95.

The effects of the railroads were by no means universally regarded as entirely beneficial. The part they played in the restoration of the exclusive culture of wheat was noted and condemned,¹² as was also their tendency to divert the capital of the farmer from the more legitimate channels of agricultural enterprise into doubtful investment in railroad stocks.¹³ The effect of the building of railroads upon the cost of farming must also be noted. It drew upon the labor supply and by opening up new lands enabled some who had formerly been farm laborers to take up land for themselves.¹⁴ It was said that the wheat crop of 1857 had cost the farmers of Wisconsin from seventy-five cents to one dollar per bushel,¹⁵ and in this increased cost the railroads had a considerable part. Then, too, in most cases the effect of railroad construction was to accelerate the settlement and bringing of new land into cultivation with undesirable rapidity. The railroad thus multiplied the number of the farmer's competitors, as against giving him a better market. In the annual report of the Milwaukee and Mississippi River railroad for 1857, attention was called to the building of the McGregor, St. Peter and Missouri River railroad from McGregor, opposite Prairie du Chien, westward, and that region was said to be already occupied to a large extent and under cultivation for 150

¹² "Wisconsin is being skinned—not slowly either, as steam and telegraph have quickened the spirit of the age. The easier and faster modes of cultivation, the Reaper, the Threshing machine, the Railroad are only so many additional helpers and accessories to the more rapid depletion of the soil of the fertile virgin prairies of the west." *Wis. Farmer*, 9: 381.

¹³ "Many of our farmers are mortgaging their farms and paying ten per cent. interest, to invest in railroad stock, and are receiving on those investments ten and fifteen per cent. stock dividends, including interest. How much better it would be for the farmer to resort to the same means to get money to invest in sheep and have the satisfaction of controlling his *own property* and realizing over and above interest, twenty or thirty per cent. cash dividends. They will say that their farms are enhanced in value by building railroads which I will admit, and will add—your farms are equally enhanced in value by keeping sheep. And so far as transportation is concerned, a grain farmer in this State is farther from a market with a depot at his door, than the wool grower is without a railroad." *Ibid.*, 7: 73.

¹⁴ See Martin, *History of the Grange Movement*, 380-81. See *Wis. Farmer*, 6: 3, for the statement that there were probably more than sixty or seventy thousand men engaged upon railroads alone in the states west of the Ohio river.

¹⁵ *Rep. of Milwaukee Board of Trade for 1858.*

miles west of the Mississippi river by farmers who were subscribing and paying liberally towards the construction of their road.¹⁶ The home market had there, too, been found insufficient and an outlet had to be secured for the constantly increasing surplus. How this grain came directly into competition with that of the Wisconsin farmers is shown by the statement in the report of a committee of the same company a few years later that the country west of the Mississippi river from Dubuque to St. Paul furnished 10,000,000 bushels of wheat for export,—as well as considerable quantities of flour; and that of this wheat about 3,000,000 bushels annually had passed over that road and that double that quantity could be obtained if necessary facilities were offered.¹⁷ This was highly pleasing to the railroads and to the grain dealers of Milwaukee, but it sent millions of bushels into competition with Wisconsin wheat, first at Milwaukee and later in the markets of the world.

Occasionally the railroads were instrumental in holding back land from settlement. This occurred in connection with the "land grants."¹⁸ It must be acknowledged, however, that the evil effects of the opposite tendency were much more extreme and far-reaching.¹⁹ It has been asserted that the land grants had little or nothing to do with the construction of railroads in Wisconsin inasmuch as the latter were built before the land be-

¹⁶ *Rep. of Mil. and Miss. R. R. for 1857.*

¹⁷ See *Report of Committee*, May, 1863, relative to the securing of a controlling interest in the railroad from McGregor to St. Paul. *Op.* p. 115 above as to diversion of entire grain trade of upper Mississippi in 1860 to Milwaukee.

See *Trans. of State Agric. Soc.*, 1880-81, p. 43 ff, for the view that this bringing in of cheap land by the extension of railroads meant not decay but progress in the agriculture of the areas farther east, as it resulted in mixed husbandry there.

¹⁸ See *Wis. Farmer*, 8: 421. Also *Hist. of La Crosse Co.* (West. Hist. Co., 1881), pp. 403-4. Also Kessinger, *Hist. of Buffalo Co.*, 369. Also *Trans. of State Agric. Soc.*, 1870, p. 379.

See pamphlet on the *Renewal of the St. Croix and Lake Superior Land Grant*, Hudson, Wis., 1872. Also Sanborn, *Congressional Grants of Land in aid of Railways*, 46.

¹⁹ As a result of the land grant from Tomah to St. Croix and the proposed railroad, "speculation was rife" in Eau Claire county, and "some of the wild-est and most visionary schemes ever generated in the mind of man owed their births to this land grant . . ." *Hist. of the Chippewa Valley*, (Geo. Forrester, Ed.), 1891-92, p. 202. See also *Rep. of La Crosse Board of Trade for 1879*. See *Rep. of La Crosse and Mil. R. R. for 1856*.

came available as an asset. It is further claimed that the land grants proved more expensive than they were worth.²⁰ This view is plainly incorrect for the state as a whole. It is impossible to go far into the history of the early construction of railroads in Wisconsin and not be convinced that the land grants did play an important part in their promotion and initiation, at least. These lands constituted an asset upon which money was borrowed and by means of which capitalists were interested.²¹ The fertility and productiveness of Wisconsin lands and the richness of the forests had been heralded far and wide, and it was a perfectly sound proposition that at some future time those lands would be valuable and that the building of railroads would make them valuable. No doubt there were extravagant ideas in reference to the possibilities of thus realizing upon the lands within a brief period, but this consideration serves to emphasize rather than minimize the influence of the land grants upon the initiation of railroad construction.²²

The early wheat growers of Wisconsin anticipated with the advent of the railroad a lower cost in the marketing of their grain.²³ For a brief time this anticipation was realized in most

²⁰ See *Rep. of La Crosse and Mil. R. R.*, for 1856 and 1857.

²¹ See Cary, *Organization and History of the C. M. and St. P. R. R.*, 197, 325.

²² See above, pp. 135-7 for a consideration of the effect of the stimulation of the construction of railroads upon the spread of wheat growing within the state. For an account of land grants to railroads in Wisconsin, see Meyer, *History of Early Railroad Legislation in Wisconsin*, in *Trans. of Wis. Acad. of Sciences, Arts and Letters*, 12: 360 ff. Also Cary, *Organization and History of the C. M. and St. P. R. R.*, 9, 10, 19, 194, 325; Sanborn, *Congressional Grants of Land in Aid of Railways*.

²³ See above p. 16. See *Trans. of State Agric. Soc.*, 1879-80, pp. 220-1 for a statement by Hon. Sat. Clark of Horicon that in early days he had known a great many of his neighbors to go to Milwaukee with a load of wheat and return without a cent, the expense taking the whole; and that he himself had over three thousand bushels of wheat in his barn which he had been unable to sell at any price but which he sold for 82 cents per bushel as soon as the railroad was completed to Ripon. See *Ibid.*, 1880-81, p. 42 for a similar statement as to hauling of wheat 40 to 100 miles to market—requiring four to ten days—and receiving 35 cents to 50 cents per bushel, and, after paying hotel bills and getting a few necessities, having scarcely enough money to pay the expenses of returning. See Martin, *History of the Grange Movement*, 377, for the statement that farmers were promised the carriage of wheat to Milwaukee, after the construction of the proposed railroads, for 5 cents to 10 cents per bushel instead of the 25 cents to 50 cents they were then paying. The cost of transporting wheat from Whitewater to the lake in 1851 averaged

parts of the state.²⁴ The railroads, in their turn, had early emphasized the improbability of competition between the various lines that were being built, asserting that there was enough traffic for all.²⁵ Almost immediately, however, in consequence of the panic of 1857 there was serious competition involving low rates at competitive points and on through traffic and discrimination against local traffic and non-competitive points.²⁶ On the other hand, complaints soon arose among the farmers about high rates and discriminations. As early as 1856 it was asserted that the low price of wheat at Madison was due in part to "high prices of inland freight."²⁷ The promised control of the railroads by the farmers never materialized to the slightest extent. They found themselves unable to control even the grain dealers,²⁸ and renewed attention was directed toward securing the

15 cents to 20 cents per bushel and it was asserted that the actual cost of carriage by railroad would not exceed one cent per bushel—thus leaving a profit of 6 cents at a charge of 7 cents per bushel. *Exhibit, Mil. and Miss. R. R.*, April 16, 1851.

²⁴ See above, p. 46, also Hibbard, *Hist. of Agric. in Dane Co.*, 140; and *Rep. of Board of Trade* for 1857, and of *Chamber of Com.* for 1858 and 1859, Milwaukee, for low rates for carriage of grain on the lakes during those years.

²⁵ "In no part of the West can the construction of Railroads outstrip the wants of the people or their ability to supply them an abundant traffic." Quoted in the *Annual Report of the Milwaukee and Miss. R. R.* for 1853, from the *American Railroad Journal*. See *Ibid.*, *Report* for 1855: also *Rep. of the La Crosse and Milwaukee R. R.* for 1855.

²⁶ "The local business of railroads must mainly be relied upon for support as through business is generally competed for and does not afford much profit." *Rep. of Mil. and Miss. R. R.*, 1858. See also *Report* for 1857. In 1859 there was loss of revenue and decrease of freight traffic due to competition, to the opening of new lines and to the desire in a depressed period, by rival lines, to secure business at any rate. . . . "The local freight is the only encouraging feature exhibited by the operations of the year. . . . Only a vigorous effort or an arrangement preventing competition or a revival of business can enable the road to be retained by the stock-holders." *Rep. of the Mil. and Miss. R. R.* for 1859.

²⁷ *Wis. Farmer*, 8: 556. Upon the completion of the Milwaukee and Mississippi railroad to the Mississippi river, that road was compelled in consequence of competition by way of the river, to carry wheat from Prairie du Chien to Milwaukee for 9 cents per bushel,—which was very little, if any, more than from Madison to Milwaukee, half the distance. *Hist. of Green Co.* (Union Pub. Co., Springfield, Ill., 1884), 393.

²⁸ See Hibbard, *Hist. of Agric. in Dane Co.*, 140, for an account of the opposition to the extortions of the railroads and grain dealers. The Dane County Farmers' Protective Union was organized and built an elevator at Madison. But the opposition ended in a fiasco. The La Crosse road had incurred the hostility of the State Agricultural Society in 1857 by refusing to grant lower rates on stock and articles for exhibition at the annual fair, and on account of general disposition to be "unobliging". *Trans.*, 1854, 55, 56, 57, p. 518.

improvement of the interior water ways. Competition and loss of revenue begat a tendency toward combination among the railroads and the farmers were not slow to voice their disapproval.²⁹ During the high prices of the war period, the opposition to high freights in a measure declined.³⁰ The instinctive dread of monopoly had again been aroused, however, and was not to down. When at the close of the war the prices of farm products began to fall while rates on the railroads did not diminish accordingly, the storm of opposition broke out anew,³¹ and

²⁹ "The railroad companies of this State have a scheme for consolidation which should receive the attention of every man interested in the welfare of the State. If a company of perfect men could be found, such an arrangement would be more economical than the present. But, unfortunately, the people of Wisconsin have had some experience which must incline them to distrust the perfection of railroad men, if of nobody else, and it is presumable that they will not willingly put themselves in the power of so stupendous a monopoly as the one proposed." *Wis. Farmer*, 16: 41. See *Trans. of State Agric. Soc.*, 1861-68, pp. 99-100.

See *Third Annual Rep. of Mil. and Prairie du Omen R. R.*, 1863, for arguments for consolidation; see *Ibid.*, 1866 for actual consolidation. See *Wis. Farmer*, 14: 74, for complaint of high freights; also *Ibid.*, 61.

³⁰ See Periam, *The Groundswell*, 222-23, 225-26. In an article in the *Quarterly Journal of Economics*, 20: 259-78, by Emerson D. Fite, it is pointed out that prices for agricultural products in the West in 1864 and the first part of 1865 were from 100 per cent. to 200 per cent. higher than in 1861 while freight rates for grain from Chicago via Buffalo to New York city were less than in 1861, when freights had undergone a sharp advance only to decline again. It is further asserted that this rise in the price of farm products was thus not only greater than the advance in freight, but lasted longer, to the resulting prosperity of the farmers. It must be remembered, however, that local rates on the grain-gathering roads west of Chicago and Milwaukee were not subject to the restraint of water competition and manifested a strong upward tendency.

See Martin, *History of the Grange Movement*, 316-17; see below, note 31, reference to Grosvenor.

³¹ Periam, *The Groundswell*, 223 ff. Also *Wis. Farmer*, 14: 61; Martin, *History of the Grange Movement*, Chs. XVII and XX.

In an article in the *Atlantic Monthly*, Nov. 1873, pp. 591-610, by W. M. Grosvenor, it is pointed out that while through rates and charges for long distances—in general from Chicago eastward—were not higher in 1873 than the rates of 1860, on the other hand, the published rates on the grain gathering roads west of Chicago and Milwaukee, where water competition did not exist and where inter-railroad competition was also at a minimum, which averaged only 1½ cents per 100 miles between western cities in November, 1860, averaged fully 2 cents for similar distances in 1873. The average charges on these western roads are said to have been 82 per cent. higher than the average on the great competing roads eastward—a difference disproportional to the difference in tonnage, and which had led to very great complaint in the West.

agitation for control by the state began to take shape.³² Interest was again aroused in reference to transportation by water within the state and canal conventions were held at Prairie du Chien in 1868 and at Portage city in 1869, and a memorial presented to Congress in reference to the proposed public improvements centering at Green Bay.³³ It is significant that at this time attention was directed anew toward the possibility of building up manufactures and a home market,³⁴ and prophets again arose who taught that the way to solve the question of transportation was to transform the agriculture of the state.³⁵ In respect to complaints about inadequate facilities of transportation,³⁶ it may be noted that railroad construction had almost entirely ceased in Wisconsin during the period of the Civil War. During the decade 1859-1869, an average of only a little over 25 miles of railroad per year was built,³⁷ while the amount of grain to be transported had increased greatly on account of the development of Iowa and Minnesota. The railroads had

³² See Hibbard, 141, 142, with footnote references; see *Trans. of State Agric. Soc.*, 1869, pp. 133, 139; 1870, pp. 142, 145; 1873-74, pp. 55, 93.

See also *Wis. Farmer*, March 21, 1868, for an article on *Railroad Reform*.

For complaints of discrimination see the *Sparta Herald*, June 15, 1869; Feb. 20, 1870; also the *Beaver Dam Argus*, May 29, 1869. See also Martin, *History of the Grange Movement*, 1873, p. 379.

³³ *Trans. of State Agric. Soc.*, 1869, p. 73 ff. See also *Report on the Improvement of Rock River*, by legislative committee in 1867, and Wilson's *Report on the Survey of Rock River*, 40th Cong. 1st Sess., Ex. Doc. No. 15; see *Commercial and Financial Chronicle*, 16: 207-8 (Feb. 15, 1873).

³⁴ *Trans. of State Agric. Soc.*, 1861-68, pp. 452-59; 1873-74, pp. 58-9, 359-65; 1875-76, pp. 380-81; 1876-77, p. 37. *Wis. Farmer*, 18: 256.

³⁵ *Trans. of State Agric. Soc.*, 1872-73, p. 159; 1874-75, pp. 333-46. "The farmers of Green county have settled the question of railroad monopoly . . . Railroad charges ate up profits and the farmer was no better off than before. Then came the cry for cheap transportation and the subject of additional lines of railroads was agitated. Some of the farmers did not worry about transportation as they engaged in cheese making, and the cost of transportation of a pound of cheese is insignificant as compared with the cost of production, etc." *Hist. of Green Co.* (Union Pub. Co., Springfield, Ill., 1884), 414.

³⁶ See Table VII. In the article quoted by Grosvenor, referred to above (Note 31) the high cost of operating the railroads is said to have been due to the tariff—particularly in reference to the high price of iron—and that this led to high rates on local non-competitive traffic. The cure prescribed was more competition in transportation and this was to be secured by lowering the tariff and thus stimulating the construction of more railroads.

³⁷ "High prices of labor and material have necessarily retarded the building of railroads." *Rep. of Milwaukee Chamber of Com.*, for 1865.

gotten the situation yet more effectively under their control by "arranging their differences" and by actual consolidation.³⁸ High prices had stimulated the production of grain in the West in general, wheat in particular in Wisconsin, and the farmers with a great surplus of grain were absolutely dependent upon the railroads for transportation to furnish them the means of livelihood.

Under such conditions as these in the West generally, arose the "Granger" movement, the aims of which, apart from the desire for closer association among farmers, were the more specific ones of cheaper and more adequate transportation, opposition to railroad monopoly and to other combinations inimical to the interests of the farmer, and regulation and control of the railroads by the state.³⁹ Although the movement did not originate in Wisconsin, it is interesting in this connection because the Wisconsin phase of the general situation is intimately related to the system of exclusive cropping to wheat. In 1869, the farmers of Wisconsin produced 24.28 bushels of wheat per capita,—the highest yield per capita for any census period in the history of the state. The 42.5 bushels per capita of corn, oats, rye, barley and potatoes could bear transportation to a less extent even than wheat.⁴⁰ Of the 2.34 per capita of live stock in the state at the same period, 1.00 denotes the number of sheep. Of other live stock there had been no very considerable per capita increase since 1849 except in horses, and horses represented largely grain farming.⁴¹ Milch cows had increased from 0.21 per capita in 1849 to 0.29 per capita in 1869, but as yet dairying had scarcely made a start in Wisconsin and was of less significance because of the existing depression in that industry. It thus happened that the only dependence of the Wisconsin farmer to any considerable extent for cash sales apart from wheat was upon the very moderate development of the wool growing industry. It

³⁸ In 1866 the Milwaukee and Prairie du Chien railroad was absorbed by the Milwaukee and St. Paul railway. *Third Ann. Rep. of Mil. and St. Paul Ry. Co.* (for 1866).

³⁹ See Periam, *The Grangerswell*, 196 ff, 223 ff, 236, 246, 260. Martin, *History of the Granger Movement*, Chs. xxiii-xxx.

⁴⁰ See Tables XI-XV.

⁴¹ See Hibbard, 130.

must be granted that the farmers of a state which grows a surplus wheat crop amounting to nearly twenty bushels per capita, with practically no other industry to depend upon except a limited development of wool growing, are of necessity at the mercy of the railroads.

By referring to the table for the price of wheat at Milwaukee,⁴² it is seen that wheat dropped from a maximum of \$2.85 per bushel in April, 1867, to a maximum of \$1.10 in April, 1869, and to a minimum of 73 cents in April, 1870.⁴³ By referring to the tables showing the average yield of wheat for the various years we note that the average for the state was lower just about this time than at any other period in the history of the wheat industry. When we recall still further that it was just at this time that the hop episode was ending with its round-up of ruin and disaster,⁴⁴ and that the tobacco crop amounted to less than one million pounds in the entire state in 1869 and was confined practically to Rock, Dane, and Walworth counties,⁴⁵ it begins to appear how absolute was the dependence upon the wheat crop, in a large portion of the state,⁴⁶ and how serious a situation high rates and inadequate facilities for transportation presented to the Wisconsin wheat farmer. We must conclude, then, that the Granger movement in Wisconsin had its ultimate origin⁴⁷

⁴² See Table VIII. See also Tables IX and X for Chicago and N. Y.

⁴³ Note that the production of wheat in the U. S. increased from 173,000,000 bushels in 1859 to 269,000,000 bushels in 1869. See Table VI.

⁴⁴ See above pp. 59-60.

⁴⁵ See Table XXII for the production of tobacco.

⁴⁶ Some of the older counties in the southern part of the state had developed a much more diversified agriculture. See above pp. 66-7.

⁴⁷ In an address by President West, of the Milwaukee Chamber of Commerce, April 8, 1871, (*Rep.* for 1871, pp. 143-144) the idea was set forth that it was impossible to get transportation cheap enough to make exchanges of corn for eastern merchandise cheap. There was too much transportation and the remedy was to get producer and consumer closer together. Protection for manufactures was wanted, but it was protection from excessive transportation. In an article by Charles Francis Adams, Jr., in the *North American Rev.*, April 1875, p. 404 ff., the position was taken that the ultimate source of all the woe of the western farmers was that they had gone too far west; and that for this they were themselves chiefly responsible, as the "steady, reliable miles of that wretched land-grant and subsidy policy which did so much to stimulate the mania for railroad construction." It was asserted that this "hurtful forcing process" brought about over-production at remote points, and eventually the Granger movement, and that cheaper transportation would result to the benefit

in the government land policy and in the excessive culture of wheat, and we are prepared, after having thus examined the situation, to understand the animus of the Wisconsin farmer against the railroads and to make some allowance for the extremes to which that opposition was carried.⁴⁸ In the flush times that preceded the panic of 1873,⁴⁹ the rapidly increasing facilities for transportation were relatively not more ample than they had been before. On the contrary, there was especial complaint in reference to the wheat crops of 1872 and 1873 which were among the greatest ever produced in Wisconsin. High rates and discriminations continued as before.⁵⁰ With the decline in business after 1873, transportation facilities, in the meantime largely increased, were once more super-abundant and a demoralizing struggle for traffic took place among the railroads themselves, and between the trunk lines and the lake carriers, and while rates were lower, discrimination existed as before.⁵¹

of the consumer and not of the producer, since the area from which production was possible was for all practical purposes unlimited. See also *Trans. of State Agric. Soc.*, 1874-75, p. 333 ff. for a similar view; also *Atlantic Monthly*, 1873, (July-Dec.) pp. 508-12, 708.

On the other hand, the position was taken by W. M. Grosvenor (in the article referred to above, note 31), that the outcry about a surplus of grain in the West was mere folly, and that the agriculture of the western and especially the northwestern states was of necessity confined to grain, as it was impossible for manufactures to be so developed in that section—without regard to natural facilities and resources—as to afford a sufficient home market. The surplus of cereals in the northwestern states was said to be due to the increasing population and cost of land which steadily drove the larger operations of agriculture to regions more remote from the centers of population, manufactures and commerce and to fresher and cheaper lands. It was accordingly asserted that the cost of moving the ever-increasing surplus of the agricultural states over a steadily increasing distance to points where it was needed to supply an ever-increasing deficit was a condition of agriculture in this country which it could not escape. The real truth lies somewhere between these two positions. See *Atlantic Monthly*, Sep. 1872, pp. 345-51 for a view somewhat different from either of the two presented above.

⁴⁸ See *Trans. of State Agric. Soc.*, 1875-76, p. 72 ff. for a strong arraignment of the railroads.

⁴⁹ To the same government land policy working out its effects in the farther Northwest can be ascribed in large measure the panic of 1873.

⁵⁰ "In 1872 somebody raised the rates from the West 5 cents per cental. His act cost the farmers millions of dollars. Is it strange that our greatest industry grows restive under fluctuations which it can neither foresee nor comprehend?" Grosvenor, *supra*. See also *First Annual Rep. on the Internal Commerce of the United States*, (1875-76) pp. 180-82.

⁵¹ See *Trans. of State Agric. Soc.*, 1880-81, p. 309 ff. Also Hibbard, 142.

Under the influence of various causes⁵² of which the question of transportation was not the least, the agriculture of the state underwent a marked change during the decade. The area of improved land increased nearly 60 per cent. and population increased about 30 per cent., while the acreage sown to wheat increased but slightly.⁵³ The per capita yield of wheat decreased to 18.92 bushels, while other crops increased to a combined per capita yield of 63 bushels,—chiefly corn, oats, and barley. Live stock increased to a combined total of 3.00 per capita,—the largest at any census period in the history of the state.⁵⁴ The number of sheep remained unchanged, so that the increase was in other kinds of live stock entirely. The development of the dairy industry was reflected by the increase in the number of milch cows from 0.29 to 0.36 per capita, but the increased yield per cow must also be taken into consideration. There was a large increase in the cultivation of tobacco, particularly in the southern part of the state, where wheat declined markedly, and especially in Dane and Rock counties.⁵⁵ The tendency away from wheat and toward diversification in agriculture was thus marked⁵⁶ and if under these circumstances the agitation in reference to transportation was less strenuous as time went on, the inference is plain that under the changed conditions the farmers of Wisconsin were to a less extent at the mercy of the railroads, and largely so because they had turned their attention to pursuits in respect to which transportation was not so important a factor.⁵⁷

⁵² See Chapter X.

⁵³ See Table IV, for estimates of U. S. Dep. of Agric.

⁵⁴ Sheep have declined since and stock worth more per capita have taken their place. The number of live stock in Wisconsin was greater per capita in 1900 if we include cattle under 1 year.

⁵⁵ See Table XXII.

⁵⁶ See *Trans. of State Agric. Soc.*, 1879-80, pp. 21, 22, for a statement of the changed conditions.

⁵⁷ See, however, for later complaint in reference to railroads the speech of Senator H. A. Taylor, March 20, 1889, on Senate Bill No. 19, to regulate railroad traffic. See *Arguments* before the Railroad Committee of Wisconsin State Legislature, having under consideration Bill No. 195, to regulate railroad traffic. [Published in accordance with Joint Resolution, No. 16, Senate (1889)]. Later agitation in reference to railroads in Wisconsin has had to do in general rather with public control and matters of taxation, than with inadequate facilities and high freights.

In this growth in diversification of industry which placed the farmer in a more strategic position in reference to the railroads, what part did the railroads, apart from other assignable causes, play? We have more than once had occasion to note the fact that, according to all testimony, the first effect of the railroads was to give an impetus to the excessive culture of wheat.⁵⁸ Exploitation of the soil of Wisconsin was greatly accelerated by the improved system of transportation, although that excessive culture had its origin in other causes.⁵⁹ Inspection of the railroad map, showing the construction for the different decades, and comparison with the charts representing the development of the wheat area and with the table denoting the degree of specialization, prove that for the state, as a whole, the railroads had little influence after 1869 in increasing the tendency toward excessive culture of wheat. The increase in total mileage of railroads in Wisconsin from 1869 to 1879 was the largest of any decade in the history of the state,⁶⁰ and was confined chiefly to the newer portions of the state. But we have just seen that there was a decline in wheat and a marked tendency toward diversification in the state, as a whole, during the decade. In the central portion of the state, where railroad construction was large for the first time, there was a considerable decline in the growing of wheat. In St. Croix and Buffalo counties there was a decline in wheat growing, though there, too, for the first time railroad construction was important. In Polk, Barron, and Eau Claire counties, with similar railroad construction, wheat increased in importance with the advent of railroads, while Chippewa and Dunn counties, under similar circumstances, about held their own. In the eastern section of the state, the large increase in railroad construction during the decade was attended by a general increase in the importance of wheat.

⁵⁸ See above, note 22. Compare again the chart of the wheat area in 1859 with the railroad map; also compare the tables denoting the degree of specialization in wheat in the various counties at the different periods, with the railroad map showing the construction of railroads during different decades.

⁵⁹ For a discussion of the *Influence of railroads on wheat producing*, see *U. S. Agric. Rep.* for 1882, pp. 68-9.

⁶⁰ See Table VII.

The explanation seems to be somewhat as follows: railroad transportation had already exercised its influence in the southern counties, and in the river counties, which had enjoyed the advantages of the railroads farther south by means of the river. In the northern, interior counties, which were more isolated, the clearing away of the timber and the advent of the railroads, together gave an impetus to wheat growing.⁶¹ In the interior of the state, the soil was unfitted for wheat growing and the tendency during the decade was toward rye and potatoes rather than towards wheat.⁶² In the eastern section, the timber had been cleared away to a considerable extent and railroads for the first time exercised their full influence upon wheat growing. In all of these counties where wheat increased with railroad construction, there was marked decline in wheat in the following decade, though the construction of railroads continued at the same time important. The conclusion to be drawn from all this is that the effect of the railroad upon the wheat industry was two-fold: in the first place, directly and immediately toward specialization in wheat; in the second place, the effect was ultimately and indirectly toward diversification. The indirect and ultimate influences remain to be discussed. In the first place, the added impetus given to specialization in wheat accelerated the exploitation of the soil and, consequently, hastened the time when rotation of crops and diversification had to be taken up. This is shown by the fact that the rise and decline of the industry was most extreme in those counties where, on account of the absence of forests, the railroads could have their full and immediate effect.⁶³ In so far as railroads reduced the cost of transportation, their effect was to bring back into cultivation land upon which the yield had so declined or on which the cost of production had become so high that it was

⁶¹ In many of the interior counties, a home market is spoken of as absorbing all the wheat, but an inspection of the table for per capita yield shows that this is improbable. Compare, for example, Eau Claire county.

⁶² See above p. 79.

⁶³ *Cf.*, for example, Richland and St. Croix, neither of which had railroads within their boundaries previous to 1870, but both of which had similar advantages of transportation near at hand. Compare Dane with Calumet; or compare Monroe and Pierce.

no longer profitable for the culture of wheat. Exhaustion of the soil could thus be carried farther. Undoubtedly, the influence of the railroads in this respect was very great in the older counties. In so far as railroads caused a rise in the price of land, their effect was to ultimately favor the pursuit of some other industry less expensive in land than the culture of wheat. Such an effect was probably very considerable, though not immediate. It would not ordinarily come into operation until the land had passed out of the hands of the original holder who would, of course, capitalize, in the selling price, any added earning power which the building of the railroad might give to the land. There is yet another way in which the railroad tended to encourage and bring about diversified industry. We speak here of the educational and broadening influences of the railroad. The railroad brings newspapers and the telegraph. It encourages travel and makes men more intelligent, more thoughtful and less satisfied to move in the old ruts. Anything that tends to overcome habit, inertia, and indifference to one's condition must make mightily for a change to a better condition. Such an influence is the railroad and that influence in Wisconsin, as elsewhere, has been very great. If the wheat farmers of Wisconsin were disappointed in the extent to which the railroads served them, yet it is largely due to the civilizing agency of the latter that a class of farmers was developed sufficiently intelligent to create an agricultural industry so rich and varied as that of the present.⁶⁴

The railroad ultimately brings the farmers closer together, too, and enables the latter to wage a more equal contest with the former. Railroads combine, because combination is easy,—is, in fact, unavoidable. Farmers do not combine, because, for them, combination is almost impossible.⁶⁵ In this fact lay one reason why the dairyman succeeded where the wheat farmer failed. The

⁶⁴ Periam, *The Groundswell*, 443-46.

⁶⁵ See editorial in the *Northwestern Miller*, Sept. 18, 1885, (p. 268) for the statement that farmers could not hold their wheat, as they had no organization and could not form one; that one-half, or even more, of the farmers of this country and Europe would be compelled to sell before Dec. 1, and that fully nine-tenths must sell not later than January.

former not only produced a product that would stand transportation for a long distance, but organization was possible to the dairymen, on account of their fewness of number, superior intelligence, and the co-operative nature of their industry, and necessary to them on account of the obstacles to be overcome. No one can follow the development of the dairy industry in Wisconsin and not recognize how much organization, both in reference to production, transportation, and markets, has had to do with the success of that industry.⁶⁴ On the other hand, no one can study the wheat industry and not be impressed with the almost utter inability of the wheat farmers to associate themselves for their common interest.

If the wheat farmer depended upon the railroads in the early period of the wheat industry, it is no less true that the early railroads were almost absolutely dependent upon the farmer, and, particularly, upon the wheat farmer. The early railroads in Wisconsin were at first simply devices for getting wheat to market. A failure in the wheat crop meant serious, almost total loss of revenue; it meant the loss of the revenue on the wheat itself and it meant, further, the loss of the freight upon the commodities for which the wheat farmer exchanged his commodity. The following table shows how largely the railroads depended on wheat for their traffic.

Road.	Date.	Total Tonnage East.	Wheat and Flour Tonnage	Per cent Wheat.
Mil. and Horicon,*	1850	11,300	10,738	94
Mil. and Mississippi	1853	12,005	8,523	66
Mil. and Mississippi	1853	35,000	25,408	73
Mil. and Mississippi	1854	63,826	41,030	64
Mil. and Mississippi	1855	81,780	68,538	78
Mil. and Mississippi	1856	68,316	48,474	77
Mil. and Mississippi	1857	71,804	54,307	76
Mil. and Mississippi	1858	68,576	76,948	78
Mil. and Mississippi	1859	97,198	79,300	78

* 10½ months.

⁶⁴ See below pp. 168-9.

Road.	Date.	Total Tonnage East.	Tonnage Wheat and Flour.	Per cent Wheat.
La Crosse division of Mil. and St. P. Ry.	1899	308,854	316,266*	79.3
Prairie du Chien division Mil. and St. P. Ry. (Mil. and Miss. Ry.)....	1899	339,188	274,040*	80.8
Iowa and Minn. Division Mil. and St. P. Ry.	1899	206,317	135,267*	65.5
Mil. and St. P. Ry. as a whole.....	1899	941,354	725,573*	77.1
Chicago, Mil. and St. P. Ry.....	1885	3,468,306	1,295,575*	37.4
Chicago, Mil. and St. P. Ry.....	1900	17,757,419†	2,310,788*	13.0

In 1858, 79 per cent. of the entire revenue on the Milwaukee and Mississippi railroad was derived from the carriage of wheat and flour, and in 1859, the proportion was 77 per cent. This was largely in excess of expectations.⁶⁷

The following table shows the number of bushels of wheat produced to every mile of railroad at the different census periods in Wisconsin:

1859.....	19,613 bushels of wheat produced to 1 mile of railroad.
1869.....	22,442 bushels of wheat produced to 1 mile of railroad.
1879.....	3,551 bushels of wheat produced to 1 mile of railroad.
1889.....	2,171 bushels of wheat produced to 1 mile of railroad.
1899.....	1,890 bushels of wheat produced to 1 mile of railroad.

These figures⁶⁸ show the extent to which the railroads must have depended upon the wheat industry within the state in

* Total wheat, flour, and mill feed.

† Total tonnage, east and west, as tonnage east is not given separately. The proportion of the tonnage of wheat, flour and mill feed to the total tonnage on the C. M. and St. P. R. R., in 1885 was 20 per cent.; on the Milwaukee and St. Paul Ry., in 1869, the similar proportion was 53.9 per cent. and on the Milwaukee and Mississippi in 1859, 47.5 per cent. The increase in the proportion of wheat and flour (mill feed is negligible) to Total traffic, from 1859 to 1869, was probably due to the fact that a large proportion of the wheat came from Minnesota and Iowa and does not necessarily indicate an increasing dependence of the railroads upon wheat growing in Wisconsin. Of the 9,077,591 bushels carried on the La Crosse Division in 1869, over 52 per cent. was shipped from the city of La Crosse, and on the Prairie du Chien division, of the 4,851,875 bushels carried, over 64 per cent. was shipped from the city of Prairie du Chien.

Statistics for the La Crosse and Milwaukee R. R., in 1859, are not available.

⁶⁷ It was estimated in the *Report* for 1851 that wheat would furnish as much revenue as all other exports of any kind whatsoever.

⁶⁸ If we accept the state statistics of a crop of 27,316,306 bushels in 1860, then there were produced in that year 31,016 bushels of wheat to every mile of railroad in the state.

their early history and the marked extent to which that dependence has disappeared. That this almost complete dependence of the early railroads upon wheat was a bad thing for the railroads as well as for the farmers is easy of demonstration. Upon the fickleness of the season, and that in respect to one crop, rested the prosperity of the railroads. Further, the movement of wheat was seasonal, demanding extraordinary facilities at certain periods, with a great decline in traffic at other periods. This resulted in uneconomic use of equipment. Fluctuations in the price of wheat emphasized this unsteady movement of traffic. This unreliability and irregularity in respect to the wheat crop and its transportation was an important cause of unstable financial conditions in the state during the wheat period. Wisconsin is still preëminently an agricultural state and between the farmers and the railroads there is very great mutual dependence.⁶⁶ But thanks to a diversified agriculture, both the farmer's activities and the railroad's equipment are more economically utilized and no single vicissitude of season or of market can threaten the prosperity of either farmer or railroad.

⁶⁶ See *Third Ann. Rep. Mil. and Prairie du Chien R. R.* (1863); also, *Trans. of State Agric. Soc.*, 1881-82, pp. 49-50.

CHAPTER X

OTHER CAUSES OF THE DECLINE IN WHEAT GROWING IN WISCONSIN AND OF THE CHANGE TO OTHER FARM PURSUITS

In the preceding two chapters, the position is taken that the most important and most ultimate of the causes operating both in the rise and in the decline of the wheat industry in Wisconsin, as elsewhere, was the existence of cheap, fertile lands—first, within that state, and then beyond its borders—supplemented by the introduction of railroads—first, into Wisconsin, and then into the new regions beyond.

Of the other causes operating in the same direction, the most potent and that most commonly asserted to be the primary cause of the decline of wheat growing in Wisconsin was exhaustion of the soil, induced by exclusive cropping to wheat with little or no rotation and by other reckless and wasteful methods of cultivation, and leading finally to declining yield such that wheat growing became unprofitable. The early accounts of agriculture in Wisconsin make frequent reference to the great productivity of the soil. Extraordinary yields of wheat and other crops were reported and an impression created that the soil was of inexhaustible fertility. By about 1845, however, as a consequence of the methods of soil exploitation followed, there began to be heard general complaints of declining fertility and lessened yield. Warnings against the system of land skinning which was practiced were disregarded, and as a result there were continued complaints which called forth further warnings. It is significant that these complaints and warnings thus began in Wisconsin before the wheat industry had really commenced to assume great importance, and con-

tinued throughout the whole period during which wheat was dominant.¹ It is very difficult to criticise the correctness of this assertion of declining yield. There can be no doubt that new land generally yielded more than land that had been cropped to wheat for a series of years.² How great that decline in yield was and how soon the high yield on new land began to decline materially is, however, difficult to determine. It would seem that if decline in yield had taken place universally to the extent asserted, the wheat industry must have been driven from the state before it was fairly started. If one can judge by the average yields for the different counties and for the state as a whole at the various periods for which the data are available, the conclusion is irresistible that, excluding the abnormal years 1860 and 1864,³ the decline in yield has been somewhat overstated. Reference to the chart with the curve representing the trend of the average yield for the state as a whole shows no such extreme decline as is generally asserted.⁴ Nor is a decline in yield in the older portions of the state overbalanced by the influence of higher yields in the newer sections of the state, for inspection of Table V shows that the average yield in the newer counties has not been higher than

¹ Within recent years there has been a consensus of opinion that crop yields have increased and this increase is usually ascribed to the improvement of the soil due to better methods of cultivation and to the introduction of the live stock industry—especially dairying.

² See *Trans. of State Agric. Soc.*, 1853, pp. 151-52, where it is stated that in 1853 the yield of wheat on new land had been twenty-five to thirty bushels per acre, while in the same neighborhood farms that had been cropped continually for ten or twelve years and with buildings attached valued from \$5,000 to \$10,000 had yielded not more than one-half the quantity of grain that the new farms did. A similar assertion is made in the Pat. Office Rep., *Agriculture*, 1850-51, p. 8, in reference to Walworth county, that the yield was twenty-five to thirty bushels on new land and "after the first crop usually less except on clayey land which yields more the second and third crop than the first crop."

³ The crop of 1860 was abnormal in yield, while chinch bugs and drought injured the crop of 1864.

⁴ See Figure 7, with curve, based on the figures given for the average yield of the state by the U. S. Dep. of Agric.; see also Table V.

in the older counties.⁵ It may be further objected, however, that the average yield for a particular county represents the result obtained by combining the high yields of the land newly brought into cultivation with the low yields of the older and more exhausted lands. This may to a certain extent be admitted, but the more rapid increase of improved land in the newer counties ought, on that theory, to be reflected in a higher average yield in the new counties as a whole, which, as we have just seen, is contrary to the facts. A further objection may be raised that the land in the older counties falling below a certain minimum yield would be successively withdrawn from cultivation to wheat, thus continually relieving the average yield for that county from the minimizing influence of very low yields. This objection must be deemed in part valid. During the decade 1850-1860, wheat declined in importance in Walworth, Kenosha, and Racine counties while there was an increase in live stock, but no general increase in other crops. Accordingly we are warranted in assuming, in consideration of the complaints in that section in reference to declining yield in the wheat crop, that it was the lands affording less than the average yield in wheat that were in general withdrawn from cultivation and devoted to stock raising. It would be a fallacy, however, to conclude from this that it was always the poorest land, absolutely speaking, that was withdrawn from wheat; for this involves the assumption of the absence of other, and under the then conditions, more profitable competing crops or farm pursuits, to which the better as well as the poorer land might be devoted. We have seen too that it was just as likely to be

⁵ Compare, for example, the average yields in Buffalo and in Rock counties. Wheat has persisted in a remarkable way in the former county, while it was replaced by other crops in the latter county at a comparatively early date. Or, comparison may be made between Kenosha and Iowa counties. The first decade, it has been seen, showed a considerable decline in wheat growing in the former county and this was succeeded by further decline during the following decades. Iowa county, on the other hand, did not attain the maximum importance in wheat growing until 1860. But on the whole average yields were not higher in Iowa than in Kenosha county. Comparison of Dane and St. Croix counties, however, is in favor of St. Croix.

the owner of the poorer soil who was not in the financial position to make the change.⁶

On the whole, however, and in view of these considerations just mentioned, we are not justified in running counter to almost universal contemporaneous testimony and concluding that there was small decline in the per acre yield of wheat and that that decline could therefore have had little influence in displacing the growing of wheat. On the other hand, it does not seem possible to assign to that cause the amount of importance usually given to it.⁷ The real state of the case seems to be as follows: there was an actual and very considerable decline on new lands, after the first few crops, due chiefly to the crude methods of cultivation that were followed. This decline was so rapid that the new counties did not long show a higher average yield on the whole than the older counties. Thereafter the yield per acre was not essentially larger in the new than in the old counties, but was secured with less expense for two reasons: first, because the land being newer was relatively more productive, and involved less expense for cultivation, and in the second place, because of the low cost of the land itself. On account of these two reasons, there might be more prosperity and growth in the wheat industry on the newer, more fertile and cheaper lands, while in the older sections where land was higher and an equal yield was obtained only at a higher cost on account of the higher value of the land and the greater expenses of cultivation, depression and decline might exist; and this might occur and probably did occur with the average yield per acre not generally higher on the comparatively new than on the old lands. As suggested above, the more rapid increase of improved land in the newer counties would be offset in part by the withdrawal from cultivation to wheat of the lands giving on the whole lower than the average yields in the older counties and their disposal to the uses of some other farm pursuit. In a word, not so much declining yield, as the obtaining of

⁶ See *Trans. of State Agric. Soc.*, 1877-78. p. 101.

⁷ This suggestion has already been made above in reference to the asserted great decline in yield in some parts of the state about 1870. See p. 133.

about the same yield only at a greater cost on the older lands was the immediate cause of the depression in certain sections that finally led to the abandonment of wheat growing.⁸ This is the only way we can explain the confusing and contradictory expressions that were uttered almost in the same breath, of soil exhaustion and decline in yield on one hand, and of large yields on the other. It enables us to understand why we hear, on one hand, that wheat growing doesn't pay, that it costs more to grow than it will bring in the market and, on the other hand, that it is the staple of the state, and brings in more money than any other crop, that it is profitable, and that so long as it continues so profitable there is little hope of inducing farmers to abandon it. On this supposition we can harmonize the maledictions hurled at exclusive cropping of wheat, with the grateful acknowledgment that the wheat crop has built barns, paid off mortgages and purchased the necessities of life.⁹ And all this is consistent with the fact that the average yield was not materially different in different parts of the state.

While the yield was not ordinarily much smaller in the older parts of the state, the devastation wrought by insect pests, particularly by the chinch bug in the more southern counties, must be given due weight in the displacement of the crop in that section. The chinch bug was in especial evidence in Wisconsin in 1864-66, 1874-77 and in 1887 and succeeding years. Inspection of Table V shows the effect in the greatly lessened yield in many counties in 1864, 1877, and 1889.¹⁰ Not only on account of the actual losses did the depredations of the chinch bug tend to drive wheat out of cultivation, but also because

⁸ Note that average yields in Minnesota and the Dakotas were not high after the first few years. It is not far wrong to say that any great wheat producing region is a region of low yields, and that not because of low fertility but because *extensive* cultivation under the condition of cheap and fertile lands is found profitable. See an article in the *Quart. Journal of Econom.*, 18: 570, by C. W. Thompson, *The Movement of Wheat Growing: A Study of a Leading State*, in which the author similarly concludes from a study of wheat growing in southern Minnesota that not to loss of fertility but to diversified agriculture, to greater profit in dairying and to greater profit in wheat growing by *extensive* cultivation on cheap or low rent lands, is due the westward movement which carried that industry out of that section of the state.

⁹ See above pp. 25, 73.

¹⁰ See above pp. 58, 72, 84, 88-9.

it was necessary to pursue a system of crop rotation and cessation of wheat growing in order to stamp out the pest.¹¹ The chinch bug was a factor together with the recurrence of bad seasons and low prices, that tended to make the wheat growing industry less certain of affording remunerative returns.

It has been pointed out above¹² that when the first great break in wheat growing came in Wisconsin, in the decade 1870-1880, there was a tendency toward general farming rather than toward specialization in any particular branch of farming. This tendency was partly a cause and partly a result of the decline in wheat growing. Decreasing profitableness in the wheat crop was accompanied by increasing profitableness in a more diversified agriculture. As has been pointed out over and over again frontier conditions of cheap land, scarce labor and dear capital favored wheat growing and rendered diversified agriculture unprofitable. With the passing of these early conditions, the situation was reversed. It is almost an axiom of political economy that round-about methods of production are more profitable so soon as sufficient labor and capital can be commanded for such operations. But for a people to pursue such methods successfully requires much capital, highly intelligent labor and directive capacity, and favorable conditions in industry generally. In the most concrete way, these requirements and conditions were lacking in the early history of wheat growing in Wisconsin but began to be more and more present as frontier conditions passed away. A simple frontier economy has few wants and thus presents narrow market opportunities, and this constitutes a reactive cause

¹¹ Inquiry of several residents of Dane county as to why wheat growing had been discontinued brought the reply "Chinch bugs." A similar answer was received in St. Croix county, as a partial reason for the discontinuance of wheat growing. It was asserted that wheat growing imperilled other grain crops, since the chinch bug seemed to need some wheat to persist, but when once present was destructive of other grains too. The method of sowing wheat and oats or some other crop together was found more or less effective in avoiding the ravages of this pest. See above, note 10, for reference to the ravages of the chinch bug in the latter part of the eighties, which in connection with the declining price almost drove wheat growing from the county. See *Trans. of State Agric. Soc.*, 1882-83, p. 272 for reference to chinch bugs in Green county; also *Hist. of Fond du Lac Co.* (West. Hist. Co., 1880), 418.

¹² See p. 79.

operating against diversification. With a higher standard of living and more complex wants, the industry of a people is re-adjusted and becomes more complex, and this is the more apt to be true if some great industry upon which dependence was formerly placed becomes unprofitable, as was the case with wheat growing in Wisconsin. The introduction of live stock afforded an opportunity for the raising of other grains and farm crops, which would not stand transportation except when converted into beef, mutton or pork. Rotation of crops became possible with resulting benefit to the soil, and when followed to a rational extent made the more economical use of labor and machinery possible by distributing the former throughout the year and the latter over a longer season.¹³ The keeping of live stock also enabled the farmer to make profitable use of otherwise waste land and waste products,¹⁴ as well as to raise larger crops per acre on land the fertility of which had been thus restored.¹⁵ It was no small matter either that the farm income no longer depended upon a single crop and that an uncertain one. Great gains and great losses were both less frequent and agriculture thus became less speculative and more playful.

The part played in the spread of the wheat industry by improved harvesting and other machinery has already been pointed out.¹⁶ The great profitableness of the wheat crop on the new and fertile lands of the West, together with the scarcity of labor there, stimulated the early improvement of machinery for the growing of wheat beyond that for the growing of other

¹³ *Farm. Inst.*, (Wis.) *Bulletin* No. 20, p. 21. *Trans. of State Agric. Soc.*, 1886, p. 227; 1875-76, pp. 330-31; 1876-77, pp. 23-24. *Wis. Farmer*, 15: 177. See *Ninth Annual Rep. Wis. Dairymen's Assoc.*, p. 38 ff., for unfavorable attitude toward mixed farming. The fact of better utilization of farm labor and machinery in diversified agriculture was brought out in conversation with a man who had been acquainted with conditions on the farm for thirty years in St. Croix county. The use of the same machinery in the harvesting of crops which mature in succession was given as an illustration. On the other hand excessive diversification requires too much machinery. See *Farm. Inst.*, (Wis.) *Bulletin* No. 19, p. 57.

¹⁴ *Trans. of State Agric. Soc.*, 1886, p. 227; 1887, p. 1.

¹⁵ *Farm. Inst.*, (Wis.) *Bulletin* No. 5, p. 45.

¹⁶ See above pp. 62-3; also *Trans. of State Agric. Soc.*, 1874-75, p. 181 ff.; Keesinger, *History of Buffalo County, Wis.*, p. 372; *Wis. Farmer*, 9: 381.

crops.¹⁷ Later more rapid improvements in machinery for the raising of other crops have tended to reduce the relative advantage which wheat held over the latter in that respect.¹⁸ Improved harvesting machinery for wheat was throughout the wheat period also often bought recklessly and cared for scantily with consequent financial difficulties, which, as we have seen, tended to keep the farmer in the rut of wheat raising.¹⁹

After a time the tendency toward diversified agriculture which had in large measure displaced wheat growing in Wisconsin, gave way in its turn to a reaction toward more specialized forms of farm industry again. The growing of wheat, however, continued to decline as before, since the newer conditions were more and more unfavorable for that crop.²⁰ Of these specialized forms of industry, the growing of tobacco and dairying were the most important.²¹

The early attempts to introduce the culture of tobacco have been already referred to.²² The slow progress in this direction for many years was due simply to the fact that the conditions that favor wheat growing are unfavorable for the cultivation of tobacco. The briefest attention to the essential differences in the character of the two industries shows why this is so; for

¹⁷ *Trans. of State Agric. Soc.*, 1887, pp. 38-49; 1882-83, p. 27. *Farm. Inst. (Wis.)*, *Bulletin* No. 10, p. 243.

¹⁸ Compare cultivators for hoed crops, in general, machine corn, tobacco and potato planters; corn cutters, huskers and shredders, potato diggers, etc. The silo method of utilizing corn and other forage crops may be cited as a somewhat analogous later improvement and has particular significance in a state where the season is neither sufficiently long nor the climate sufficiently warm in large areas to bring the corn crop to full maturity.

¹⁹ *Farm. Inst.*, (Wis.) *Bulletin* No. 19, p. 57 ff.; *Trans. of State Agric. Soc.*, 1874-75, pp. 186-96; Martin, *History of the Grange Movement*, 385.

For a discussion of the relation between harvesting machinery and the size of the most economical wheat farm see the article referred to above [note 8], by C. W. Thompson.

²⁰ See above pp. 87-8; also *ibid.*, note 7, where the inability of the farmers of Wisconsin to raise cattle in competition with the cheaper range lands to the west and southwest was pointed out. [See *Trans. of State Agric. Soc.*, 1879-80, p. 211.] A similar statement may be made with reference to the sheep industry. Further, a large part of Wisconsin lies too far outside the great corn belt to enable the farmers of that state to participate largely in the production of corn-fed beef and pork.

²¹ The raising of potatoes, barley and sugar beets constitute other less important examples.

²² See above p. 31. also Hibbard, *Hist. of Agric. in Dane Co.*, 160-75.

the successful cultivation of tobacco requires, relatively, a minimum amount of land, highly intensive culture, considerable intelligence of a special kind and much labor and capital. Quantitatively speaking, nature does little and man, much, in the culture of tobacco. These considerations are sufficient to account for the late development of the tobacco growing industry in Wisconsin.²³

Somewhat similar conditions prevented the rise of dairying to importance in earlier days, though instances are not wanting in which unfavorable conditions were overcome under the stimulus of the early failure in the wheat crop.²⁴ Capital, however, was lacking for the purchase of cows of good quality and for the erection of barns and fences.²⁵ The quality of the early butter and cheese was very inferior, on account of lack of proper facilities for making and on account of lack of skill.²⁶ Further, the chief markets in the lake cities were already supplied by dairy products of approved quality—particularly from Ohio.²⁷ In the interior portion of the state at least, facilities for transportation were lacking; for it must be remembered that if dairy products on account of high specific value can bear transportation a long distance at relatively low cost, nevertheless that transportation must be rapid and afforded under such conditions as will insure arrival without deteriora-

²³ See Hibbard, *supra*. The most hasty reference to the facts set forth by Hibbard in reference to tobacco culture shows how impossible it was for that crop to occupy any place in the early agriculture of Wisconsin.

²⁴ See above p. 31. See Hibbard, 176-77; Pat. Office Rep., *Agriculture*, 1852-53, pp. 327-35., including a statement by a man in Rock county that he had milked thirty-five cows during the previous season and had been in the dairy business for the preceding seven years. See *Prairie Farmer*, 10: 74-5.

²⁵ See above p. 49. These difficulties were doubtless partly imaginary, but Hibbard [p. 177] goes too far in their disparagement. See *Sixth Ann. Rep. Wis. Dairymen's Assoc.*, 97.

²⁶ The quality of the early wheat in Wisconsin was on the contrary very superior. Good butter or cheese does not *make itself*, as good wheat *grows itself* on rich adaptable soil.

"Few that are handling cows know their business." Ex. Governor W. D. Hoard, *Fifth Ann. Rep. Wis. Dairymen's Assoc.*, 32.

²⁷ *Seventh Ann. Rep. Wis. Dairymen's Assoc.*, 29.

"Then (1850) we had to peddle our products to such purchasers as could be found or induced to buy—five or six cents a pound being thought a good price for it." *Second Ann. Rep. Wis. Dairymen's Assoc.*, 9.

tion in quality.²⁸ Still further, there was a general impression that Wisconsin lay outside of the dairy region—due in part to misapprehension and in part to the evil reputation of Wisconsin butter and cheese.²⁹ Most of all, the profitableness of wheat growing and the characteristic conservatism, and indisposition of the wheat grower to change the nature of his operations prevented the earlier growth of the dairy industry.³⁰

The extreme depression in the wheat industry, however, which followed the war, and the high prices for dairy products during the same period finally resulted for a time in a considerable development of dairying, in certain parts of the state, which was also made possible in large measure by the introduction of refrigerated transportation about the year 1868.³¹ Resulting overproduction led to depression and this in turn to the organization of the Wisconsin Dairymen's Association in 1872, from which time dates a new era in dairying within the state.³² The Association at once took steps to secure a better quality of product, to extend the breadth of the market, to secure more favorable rates of transportation and, in a word, to secure the coöperation of dairymen in general for the good of the industry as a whole.³³ A good illustration of this policy was afforded when at the annual meeting of the Association in 1879, a resolution

²⁸ *Trans. of State Agric. Soc.*, 1879-80, pp. 220-21.

²⁹ See *Seventh Ann. Rep. Wis. Dairymen's Assoc.*, 27. "The climate was not auspicious, the wild grasses resulted in a disagreeable flavor and the soil would not produce tame grass successfully. Further the water was bad." See *Trans. of State Agric. Soc.*, 1852, pp. 228-37; 1851, pp. 178-79.

³⁰ "It is harder and takes longer to convert the farmer than it does the farm to dairying." *Fifth Ann. Rep. Wis. Dairymen's Assoc.*, 30. See also *Trans. of State Agric. Soc.*, 1882-83, p. 272.

Indifference toward dairying near Columbus, Columbia county, a few years previous to 1890 was said to have been due to the ability to raise twenty to twenty-five bushels, and above, of wheat to the acre. *Eighteenth Ann. Rep. Wis. Dairymen's Assoc.*, 50.

³¹ See above p. 67. See Hibbard, *Hist. of Agric. in Dane Co.*, 178; *Second Ann. Rep. Wis. Dairymen's Assoc.*, 22; *Eighth Ann. Rep.*, 32-4.

³² *Second Ann. Rep.*, 9; *Seventh Ann. Rep.*, 128; *Trans. of State Agric. Soc.*, 1871, p. 4.

³³ *Seventh Ann. Rep. Supra.*

"Dairymen have an advantage on freights When a car-load of wheat in New York would be worth from \$500 to \$600, a car-load of cheese would be worth nearly \$3,000, and a car-load of butter \$7,000 to \$8,000." *Second Ann. Rep.*, 12. See *Ibid.*, 2. Also *Trans. of State Agric. Soc.*, 1888, p. 181.

was passed recommending to the dairymen of the state that in view of the overcrowded state of the cheese market and the higher relative price of butter, they defer making cheese in the coming spring as late as possible in order to relieve the market to that extent at least.³⁴ The Association also lent its active influence toward extending the dairy industry into new regions within the state where conditions were ripe for a change from wheat growing.³⁵ It is not too much to say that a large measure of the prosperity which followed in dairying was due to the intelligent and persevering efforts of the Association, and their activities have been thus referred to at length in order to emphasize the contrast between the absence of effective organization among the large mass of plodding wheat farmers and the part played by the compact organization of a few intelligent dairymen in reviving their industry from the depression into which it had fallen and lifting it to a new plane of progress. The dairymen, to be sure, had a great advantage: they labored in behalf of a live industry while the wheat farmers clung to a pursuit fast falling into decadence.³⁶

These elements of decadence in the wheat industry have been sufficiently set forth. It remains to point out the remaining superior advantages of dairying. One of the most important of these is the great natural adaptability of a large part of Wisconsin to dairying. Partly as a result of the united efforts of the dairymen of Wisconsin for a higher standard of quality and partly as a result of the development of refrigerated transportation, their products were soon recognized to be as good as the best.³⁷ There is no longer any question of the highly favorable natural advantages for dairying in Wisconsin.³⁸ On the other hand,

³⁴ *Seventh Ann. Rep.* 101.

³⁵ See *Farm, Inst.*, (Wis.) *Bulletin* No. 6, p. 153.

³⁶ Hibbard, *Hist. of Agric. in Dane Co.*, 178.

³⁷ See *Rep. Ind. Com.* (1900), 10: 187; testimony of Mr. Le Grand Powers, Chief, Divis. of Agric., *U. S. Census*. The reputation of the dairy products of Wisconsin for high quality suffered some decline a decade or more ago with a consequent loss of market, on account of the deterioration caused by the manufacture of "filled cheese." See discussion in *Reps. of Dairymen's Assoc.*, 1894-96.

³⁸ See *Trans. of State Agric. Soc.*, 1886, p. 83; *Fifth Ann. Rep. Wis. Dairymen's Assoc.*, 29-38; *Bulletin of Agric. Exper. Stat., Univ. of Wis.*, No. 88, (Sept., 1901) pp. 4-6; *Ibid.*, *Bulletin* No. 140 (Sept., 1906) pp. 10-17. Also *Farm. Inst.*, (Wis.) *Bulletin* No. 9, p. 219.

large portions of Wisconsin are for reasons already pointed out no longer adapted to specialized wheat growing. Continuous cropping to wheat has been seen to be destructive to the fertility of the soil while dairying is a restorative industry in that respect, and is thus self-perpetuating.³⁹ Dairying also affords a more certain revenue, while in respect to wheat growing the profits of good crops are often overbalanced by the losses involved in a succession of poor crops.⁴⁰ In the long run, therefore, dairying proves the more profitable pursuit. This fact, together with the restorative influence upon the fertility of the soil, results in higher values for land where the latter industry is followed.⁴¹ Wheat growing is thus not able to compete with dairying for possession of the land in Wisconsin. Wheat suffers further from the competition of those grain and forage crops which are subsidiary to dairying and which thus reflect in a measure the strong competitive character of the latter industry. Again, dairying results in the more even distribution of labor throughout the year and thus in its more economical utilization. Further, dairying requires both labor and directive capacity of a higher order and of a more systematized quality than does wheat growing, and naturally affords a larger remuneration.⁴²

³⁹ *Trans. of State Agric. Soc.*, 1880-81, p. 46; 1881-82, p. 181. *Seventh Ann. Rep. Wis. Dairymen's Assoc.*, 125; *Ibid.*, *Eighth Ann. Rep.*, 108 ff.

⁴⁰ *State Ann. Rep. Wis. Dairymen's Assoc.*, 22. "There has not been a bad failure in the dairy in the last fifteen years." *Ibid.*, *Eighth Ann. Rep.*, 29.

⁴¹ "A comparison of farm values between Sheboygan and Jefferson counties and the two non-dairying counties Vernon and St. Croix, on the basis of the census of 1885 shows a difference in farm values of land and products of from three to five hundred per cent. in favor of the dairy counties." *Trans. of State Agric. Soc.*, 1890, p. 130. See *Ibid.*, 1879-80, pp. 210-11; also *Fifth Ann. Rep. Wis. State Board of Agric.* for 1903, p. 235. By 1900, dairying had become so general over the state as to constitute an important factor in land values in most of the counties. As has already been pointed out above, however, land values are in general lower in the counties which still raise wheat. See Table XXIII.

⁴² "The wheat raiser has but few and simple things to think of. He may plow, sow, reap and market five hundred acres of grain and still be a man of few ideas and of narrow mental culture. But the dairyman is compelled by the very necessity of his business to be a man with eye open and active mind" *Seventh Ann. Rep. Wis. Dairymen's Assoc.*, 24. See also *Farm. Inst.*, (Wis.) *Bulletin* No. 4, p. 62.

Dairying thus tends most of all, directly and indirectly, toward the displacement of wheat and our analysis here is found to agree with the ascertained facts above.⁴⁸

⁴⁸ Reference has been made to the important part played by the Wisconsin Dairymen's Association in the development of the dairy industry and thus in the displacement of the unprofitable wheat crop. Great credit is also due to other organizations in a similar way. The State Agricultural Society, the various county agricultural societies, the farmers' institutes, the Grange and other kindred organizations have all labored toward the same end. See Pat. Office Rep. for 1858, *Agriculture*, pp. 210-13.

To the Agricultural School of the State University, however, perhaps more credit is due for the improvement of the agriculture of Wisconsin than to all other similar agencies combined. Always a center of experiment, of discussion, of agitation for and training in better methods, and of the development of valuable technical processes, it has contributed immeasurably to that high intelligence and skill which have enabled the farmers of Wisconsin to reap the corresponding rewards of intelligence and skill. See *Saturday Evening Post*, June 22, 1907.

CHAPTER XI

THE FUTURE OF WHEAT GROWING IN WISCONSIN

What of wheat growing in Wisconsin in the future? May we look for a revival of that industry in that state, comparable to its apparent revival in the state of Ohio?¹ To essay the rôle of prophet would be hazardous; but the conditions upon which wheat growing in Wisconsin in the future appears to depend may be set forth in a provisional way. The problem constitutes in part one phase of the world movement of the wheat area which involves the future of wheat growing in the United States as a whole. On the other hand, it constitutes a

¹ See above pp. 14, 21, for reference to the early decline in wheat growing in Ohio.

Ohio raised a greater number of bushels of wheat (50,376,800 bushels) in the year 1899 than at any other census period in the half century closing with that year. Further, Ohio ranked first among the states in the United States in that year in the production of wheat per square mile of area, having produced 1,235.94 bushels per square mile. This figure has been surpassed but once during the census periods included in the fifty years 1850-1900, Indiana having produced 1,316.76 bushels per square mile of area in the year 1879. Further, the per capita yield of wheat in Ohio rose to 12.12 bushels in 1899, after having fallen from 14.39 bushels in 1879 to 9.68 bushels in 1889. Iowa presents, apparently, a somewhat analogous situation but the total yield in that state in 1899 was considerably less than in either 1869 or 1879, while the per capita yield in 1899 (10.20 bushels) was but little more than half that of 1879 (19.18 bushels) and was considerably less than half that of 1869 (24.65 bushels). The increase in the yield per capita from 1889 to 1899 was, however, greater in the case of Iowa than in the case of Ohio—the per capita yield for the former state being 4.31 bushels for 1889. Delaware, Kentucky and Tennessee, both in respect to the production of wheat per capita and per square mile of area, are comparable to Ohio. Indeed, the per capita production of wheat in Delaware and Tennessee and the production per square mile of area in Delaware in 1899 were the largest of any census period from 1850 to 1900. [See *Bulletin of U. S. Dept. of Agric., Divis. of Stat.*, No. 24; *Relations of Population and Food Products in the United States, etc.*, Washington, 1903, pp. 27-32]. In the year 1900, however, Ohio was said to have suffered the greatest failure in the wheat crop ever experienced by any state in the United States. *Harper's Weekly*, 44: 823.

phase of the production of wheat within the boundaries of the United States. These two phases of the question are not independent but may be separated for purposes of discussion. The problem may be stated in another way by saying that wheat growing in Wisconsin must compete with wheat growing in the world at large and with wheat growing in the United States in particular. In addition it must compete with other crops and other farm pursuits in Wisconsin.

For a number of years, the future of wheat growing in the United States has been debated pro and con by experts in both hemispheres. One side claims that the importance of the United States in the production of a surplus for the world's wheat supply must soon diminish on account of the increase in population and the exhaustion of the area of cheap lands within that country and the opening up of new cheap lands in other countries; while the other side claims that the withdrawal of much of the land in the United States from cultivation to wheat is merely temporary, and that steadily higher prices would result in the bringing of it again into cultivation for that purpose.² In this discussion there are the widest and most irreconcilable estimates as to the possibility of increasing the wheat area in other countries, considering adaptability to the culture of wheat, competing crops and pursuits, competing foods, transportation and social factors.³ The whole problem is a complex and difficult

² See *Northwestern Miller*, Dec. 30, 1887, and Feb. 3, 1888, for reference to a review of the investigations of a number of men in respect to American competition in wheat growing, by Dr. Rudolph Meyer (1883), and also a review of similar investigations by Dr. Max Sering. See *Nation*, 39: 259; *Quart. Rev.*, 164: 445; *Arena*, 3: 641; *Pop. Sci. Month.*, 54: 145, 759; 55: 766-67; *Sat. Rev.*, 96: 506; *No. Amer. Rev.*, 168: 191, 511; *Quart. Jour. Econ.*, 18: 570; *Rev. of Rev.*, 25: 538; *Jour. of Pol. Econ.*, 1: 68, 365.

³ In reference to Canada, see Mavor, *Wheat in the Canadian Northwest*; also *Canad. Mag.*, 3: 468; 14: 137; 22: 561; 26: 29; *Pop. Sci. Mo.*, 55: 760; *Cent.*, 65: 481; *Chicago Record Herald*, Oct. 9, 1905. In reference to Argentina, see *Landwirtschaft und Kolonisation im Spanischen Amerika* von Mr. Kaerger in *Sci. Amer. Sup.*, 54: 22339; *Rev. of Rev.*, 26: 227; *Outlook*, 64: 119; *Jour. of Pol. Econ.*, 10: 206, 333. In reference to Siberia, see *Sci. Amer. Sup.*, 43: 17681-2. In reference to various countries in general, see *Chamber's Journal*, 64: 837; 72: 419; Crookes, *The Wheat Problem*, N. Y. and London, 1900; *Nation*, 41: 544; 66: 356, 4175; 67: 237; *Forum*, 24: 173; 27: 101; *Pop. Sci. Mo.*, 52: 760; 53: 1-9, 351-63; 54: 759; *Rev. of Rev.*, 16: 598; *Bankers' Mag.* (N. Y.) 50: 26, 782; *Sat. Rev.*, 58: 142; 61: 265; 64: 662; 96: 506; *Nature*, 61: 100; *Nineteenth Cent.*, 43: 879; 53: 670; *Journal Royal Statist. Soc.*, 58: 75; *Rep. of Ind. Com.* (1900) Vol. 6 [Index].

one and perhaps nothing more can be safely done here than to point out tendencies. In the first place, the tendency of the wheat industry to seek new and cheap lands is unmistakable; consequently we may look for a future relative decline of the culture of wheat in this country as a whole while these new and cheap lands are being added to the wheat growing area of the world. That the same causes that operated to drive the wheat area across the country from east to west are now operating to drive it into British North America and into South America is a commonplace statement today. Even though there has been a revival of wheat growing in some of the older states of the United States, still that revival is small when compared with the increase in population, and may be taken as an indication of the relative strength and persistence of the movement of the wheat area out of the country. In Minnesota, there has long been a movement toward the displacement of wheat growing by diversified agriculture. In a great part of the state this already amounts to an accomplished fact.⁴ The live stock industry is yearly becoming more important in South Dakota, while even North Dakota is making progress in that direction.⁵

But even should we grant the probability of a permanent rise in the price of wheat and a future revival of wheat culture in those other parts of the United States where it has become unimportant, it seems probable that Wisconsin would be one of the last states in the Union to respond to that movement. The reasons for this assertion lie partly in the strong hold that the dairy industry already has within the state, together with the special adaptation of Wisconsin to that industry, which has its basis in favorable conditions of climate, in social and race factors and in the production of grass, hay, corn and, to a less extent, oats. Wheat must compete with these crops as grown for dairy purposes, as well as with other crops,⁶ if it is to regain something of its old importance in the state. To this com-

⁴ See Thompson, C. W., *The Movement of Wheat Growing; A Study of a Leading State* in *Quart. Jour. Econ.*, 18: 570.

⁵ See *Bulletin of U. S. Dep. of Agric., Divis. of Stat.*, No. 24, pp. 31, 32.

⁶ Especially with potatoes, barley, tobacco, sugar beets, and market gardening.

petition we have seen that wheat has become unequal and so it will probably remain as long as it is a frontier crop and continues to be grown according to the extensive system.⁷ An additional reason against the probability of an early return to wheat growing in Wisconsin is found in the bad repute into which that industry has fallen and the prejudice against it among the farmers of the state. No doubt the demand for bread is paramount and must be satisfied; while a considerable and permanent rise in the price of wheat would work wonders in removing the present day prejudice in Wisconsin against that crop. Still, the demand for bread is not inexorable, because it is capable of being replaced, to a certain extent, by competing foods, and among these competing foods dairy products hold an important place. Further, for dairying, Wisconsin has comparatively greater exclusive advantages than for raising wheat. There are relatively many possible areas for the revival of wheat growing in the United States, and, if we can judge from past experience, relatively few areas exceptionally favorable for dairying—particularly in its specialized forms.⁸ The conclusion then seems to be warranted that under these conditions the wheat crop in Wisconsin will continue to be unable to compete with that crop as grown in other sections of the United States, as well as with other crops and other farm pursuits within the state itself.

There are those, however, who insist that Wisconsin enjoys no overwhelming natural advantages in reference to dairying and that large areas to the west and to the south, and presumably in other sections of the country now unimportant in respect to that industry, may with the proper amount of well directed effort be reasonably expected to become important centers, in the future, for the production of milk, butter and cheese. It is doubtful, however, whether the combination of favorable conditions that has been seen to exist in Wisconsin in

⁷ See above p. 162 ff. and footnote references.

⁸ See *Bulletin of Agric. Exper. Stat.*, Univ. of Wis., No. 60. *The Cheese Industry: Its Development and Possibilities in Wisconsin* [1897], together with the accompanying map of the distribution of cheese and butter according to the *Census of 1890*.

respect to the dairy industry, either exists naturally, or can be reproduced artificially in any considerable portions of these other areas at a cost which will permit effective competition with dairying in the former state.

On the other hand, some of the superior advantages enjoyed by Wisconsin dairymen in the past tend to diminish. Ex-Governor Horatio Seymour of New York, when addressing the Wisconsin State Agricultural Society in 1870,⁹ expressed the opinion that Wisconsin ought to do well in dairying because in that industry the cost of land plays so important a part and the latter state is well situated in that respect as compared with New York. It was pointed out a decade later that producing dairy products had been sustained on land worth \$150 an acre and that Wisconsin dairymen were "protected by the organizations of those that rule the market upon these products upon high priced land."¹⁰ With the rise in the value of land consequent to the introduction of dairying into Wisconsin, due in part to the capitalization of those same superior advantages for that industry, conditions as between New York and Wisconsin in this respect have tended toward equalization, while the cheaper lands beyond the Mississippi river, and elsewhere, that are adapted to dairying have in turn a similar advantage in that respect over the higher priced lands of Wisconsin. Further, it was noted above¹¹ that the Wisconsin Dairymen's Association was able to secure freight rates on dairy products to the eastern markets so liberal that it cost scarcely more to ship from Wisconsin than from many parts of the dairy region of New York. But there is no reason why this process of the equalization of market conditions by the neglect of distance in making freight tariffs on dairy products should not apply equally well as between Wisconsin and territory still more remote from market. As a matter of fact "The Wisconsin Dairy Manufacturers and Milk Producers' Association" has been recently organized for the purpose of bringing pressure to bear upon the Interstate Commerce Commission in order to secure the maintenance of dis-

⁹ *Trans.*, 1870, p. 133 ff.

¹⁰ *Ibid.*, 1879-80, p. 211.

¹¹ P. 168. See also *Fifth Ann. Rep. Wis. Dairymen's Assoc.*, 80-81.

tance tariff rates on dairy products from competing territory to the west of Chicago.¹² This equalization both in reference to land values and in reference to rates of transportation has also manifested its influence in respect to other farm pursuits, and, as we have seen, explains, in part, the westward movement of both the wheat area and the center of the production of live stock. The significance of these facts for our immediate purpose lies in this: that in so far as natural conditions are measurably adaptable, dairying tends to follow wheat growing and stock-raising westward and either to displace both—and especially the former—or to force different methods in both pursuits. Partly as a result of the operation of these causes, the live-stock industry in the great corn belt to the west and south of Wisconsin has been reduced to an intensive system for the production of corn-fed meat products, with the further result that land values are quite as high as in the dairy regions of Wisconsin.¹³ Wheat growing must in like manner either be carried on according to the intensive system or be driven from those regions open to competition from dairying or from other more highly organized farm pursuits—that is, from a large proportion of the present wheat area within the United States. When in this process of competition and equalization the price of wheat rises to a sufficient extent to make intensive wheat growing profitable, wheat may, with the reservations noted above in reference to other competing areas in the United States, be again grown in Wisconsin, but it will be grown in due subordination

¹² See *Chicago Record Herald*, Aug. 2, 1907.

¹³ Compare the stall-fed meat products of English farmers on the high priced lands of that country.

In some parts of the great central grain belt of the United States—especially in the state of Illinois—the live stock industry suffers serious competition from the production of cash grain crops. This is made possible by the disregard of soil exploitation which the latter method of farming involves. Land values in those sections are sustained in spite of declining yield by the general upward tendency in the price of lands.

It is to be noted that while the dairy region also moves westward, that industry does not tend to disappear in the older sections as did wheat growing. The reasons for this have been stated in pointing out the essential difference between the two industries. For a discussion of *Dairy Development in the United States* by Henry E. Alvord, Chief of Dairy Division, Bureau of Animal Industry, see *Year Book of the Dept. of Agric.*, 1899, pp. 381-402. See also *Twelfth Census*, 5: 165-86 and 9: 433-459.

to a diversified system of agriculture and not to the exclusion of other farm pursuits as in early days.

Some light may be thrown upon the future possible situation in Wisconsin in reference to the growing of wheat in connection with other farm pursuits by turning, for a closer examination, to those regions of the United States to which reference has already been made as affording an illustration of the apparent revival of wheat growing.¹⁴ It was asserted a score of years ago that the farmers of the Western Reserve in Ohio had been following dairying too exclusively in the past and that they were at that time turning their attention to the growing of wheat in connection with dairying and were getting good results, while they kept just as many cows as before and secured just as good a return from dairying. The wheat crop was said to be profitable in itself, while the straw was valuable for feed and for other purposes in connection with dairying. Further, the wheat crop was found to be the best crop with which to seed down to grass. With careful cultivation, average yields of as high as thirty-five bushels per acre had been secured in some cases for several years in succession and this had been done by the use of improved machinery and without other labor than that resulting from the fuller utilization of the help already employed in dairying.¹⁵ Examination of the statistics of the wheat crop for the year 1899 in Ohio does not, however, seem to fully justify this point of view. The wheat growing and the dairying regions remain to a large extent separate and distinct.¹⁶ Of eleven counties¹⁷ in Ohio producing over one million bushels of wheat each in 1899, but three had over ten thousand dairy cows each and all of these three had less than fifteen thousand each. On the other hand, of the ten counties¹⁸ having over fifteen thousand

¹⁴ See above p. 172, note 1.

¹⁵ *Farm. Inst.*, (Wis.) *Bulletin* No. 1, pp. 126-29.

¹⁶ *Twelfth Census*. See also *Bulletin U. S. Dept. of Agric.*, No. 55, *Bureau of Animal Industry: Statistics of the Dairy*, [with accompanying charts] by Henry E. Alvord, Chief of Dairy Division.

¹⁷ Darke, Seneca, Pickaway, Butler, Hancock, Fayette, Miami, Madison, Preble, Green, and Putnam counties.

¹⁸ Ashtabula, Trumbull, Hamilton, Stark, Geauga, Columbiana, Lorain, Portage, Cuyahoga, and Summit counties.

dairy cows each, but one¹⁹ produced much more than a half million bushels of wheat, while seven produced less than that amount each. A similar examination of the statistics relating to dairying and wheat growing in the state of New York for the year 1899 shows an even greater separation between these two branches of agriculture.²⁰

Similar reports of good yields of wheat over a series of years, where grown with proper rotation, have been made occasionally in Wisconsin,²¹ but in the meantime wheat growing in general has continued to decline rapidly in that state. The conclusion then seems to be, as already pointed out,²² that the wheat crop is, on the whole, found less useful than other farm crops as a crop supplementary to dairying, and is accordingly unable to compete with those crops on that account. Accordingly, the prospects for the growing of wheat in connection with dairying in Wisconsin do not seem encouraging. The more complete separation between wheat growing and dairying in New York, where the latter industry is much more important than in Ohio, is significant in this connection.

The other reasons set forth above in reference to the utility of the wheat crop are probably more valid than that of its importance in connection with dairying, and these reasons doubtless explain in large measure its apparent revival in Ohio and other states. This is especially true with reference to the utility of the wheat crop as contributory to successful seeding to grass.²³ As that result is, however, largely due to the fact that wheat is a winter crop in those sections, while winter wheat can be grown

¹⁹ Stark county. Even in this county, however, dairying is largely confined to the eastern portion.

²⁰ See same references as for Ohio, above, note 16.

²¹ *Farm. Inst.*, (Wis.) *Bulletin* No. 2, p. 24; No. 5, p. 45; No. 6, p. 53. See also *Trans. of State Agric. Soc.*, 1892, pp. 246, 252.

²² See above p. 170.

²³ Personal acquaintance with conditions in Ohio for a number of years serves to strengthen belief in this point of view. The high yield of wheat per capita in some counties of Ohio, in 1899, however, proves that in those sections the wheat crop has been found profitable for its own sake. Pickaway, Darke, Seneca, Hancock, and Butler counties raised 44, 35, 32, 26 and 20 bushels per capita respectively in that year.

only to a limited extent in Wisconsin, it follows that there is less reason for growing wheat on that account in the latter state.²⁴

On the whole, then, an early return to wheat growing in any considerable degree of importance seems improbable in Wisconsin unless in those few counties where it still persists in a small way. There are certainly no indications of such a revival at present.²⁵ The age of economic revolutions is, however, not past, and unexpected developments have brought many a prediction to grief.

²⁴ See, however, *Farm. Inst.*, (Wis.) *Bulletin* No. 18, p. 58. See also *Ibid.*, No. 2, pp. 24-5.

²⁵ See above p. 102, note 32.

CHAPTER XII

SUMMARY AND CONCLUSIONS

Adaptability of the soil, adaptability of wheat as a crop suitable for frontier conditions, and economic habit on the part of the early settlers of Wisconsin led to the rise of wheat growing within the state. With crop failure and decline in yield and with the breakdown of the early home market for wheat, a tendency toward diversification appeared as early as 1850. This tendency was, however, soon checked by the construction of railroads, which gave access to outside markets and which led to the spread of the wheat area over a much larger portion of the state and to an even greater specialization in the growing of that crop than before. The introduction of improved farm machinery for the production of wheat—especially during the period of the Civil War—emphasized the tendency toward that crop and facilitated the rapid exploitation of the soil.

Another important factor in producing excessive specialization in the growing of wheat was the favorable public land policy—federal and state—which led to the opening up of the cheap, fertile lands of the state on easy terms and to their settlement with extraordinary rapidity. Men are wasteful of that which costs little and cropping to wheat according to the extensive method afforded the most evident opportunity of taking advantage of the situation. Abundance of cheap land also indirectly facilitated the growing of wheat by affording a basis for the land-grant railroad. Moreover, the combination of cheap lands and railroad construction created a situation preeminently favorable to speculation in land and to this speculation wheat-growing lent itself with peculiar adaptability, as it required a minimum amount of permanent improvements. A continua-

tion of the same policy on terms increasingly favorable to prospective settlers was, in turn, largely instrumental in the movement of the wheat area out of Wisconsin and into other sections, and the state thus became entirely typical of the movement of the wheat area across the country, as a whole, from east to west. Whatever may have been the net political and social effects of the cheap land policy, it is very questionable whether it can be justified economically, as it has been the chief factor leading to reckless soil exploitation and undesirable extensivity in agriculture.

The distrust of railroad corporations by the early settlers of Wisconsin gave away with the break-down of the home-market and the wheat farmers became as eagerly desirous for railroads as they had formerly been hostile. The farmers were led to believe that they might themselves own and control the railroads, and when this hope proved without foundation they were still willing to encourage their construction by granting mortgages upon their land. High anticipations of the benefits to be derived from the construction of railroads were held by the farmers, while the projectors of the railroads were on their part convinced that sufficient business would exist to occupy all the roads that could be constructed to the West, and scouted the idea of competition. Such competition, however, soon developed and was accentuated by the depression of 1857. Local discrimination in rates at once appeared and produced dissatisfaction on the part of the farmers. The situation was the more difficult because of the almost absolute dependence of the wheat farmer upon the railroad, while the latter was on the other hand subject to all the unfavorable conditions incident to an almost entire dependence upon a single commodity for traffic. Combination among the railroads, together with the deficiency in transportation facilities, due to limited construction during the Civil War period, led to higher rates, which were largely maintained after the close of the war and which the wheat farmer was the less able to bear on account of declining prices for wheat, and on account of higher cost of production due to depleted fertility and higher land values. Under these circum-

stances the Granger movement developed in Wisconsin and relations between the railroad and the wheat farmer reached an acute stage. Additional forces, to which the railroad itself had contributed as an educative and economic agent, were, however, already in operation, leading to a marked change in the agriculture of the state, in consequence of which the dependence of farmer upon the railroad became less absolute. The railroad in its turn came to have less complete dependence upon a single industry and benefited accordingly. Largely on account of these circumstances the struggle between the railroads and the farmers in a measure subsided.

In the early movement away from specialization in the growing of wheat, the tendency was at first toward general diversification in grain farming and stock raising. Later a reaction set in toward specialized farming—especially as represented by dairying, which became the characteristic farm industry of the state. Contrary to early opinion, natural conditions in Wisconsin were found to be exceptionally favorable for dairying—particularly for the manufacture of cheese. The changed conditions which made the growing of wheat unprofitable at the same time contributed to the success of dairying. The latter industry in its turn now felt the stimulus of racial and economic habit long dormant because of unfavorable environment. Those who failed to adapt themselves to the new conditions moved out of the state with the wheat area and continued to grow wheat. Dairying required the exercise of a far more discriminating intelligence and unremitting care than the growing of wheat and afforded a much larger sphere for the application of technical knowledge. The compact organization of the dairy farmers, which the coöperative nature of the industry and the high range of intelligence among dairymen furthered, afforded another telling advantage over wheat growing as a pursuit. Favorable rates of transportation were secured for dairy products and a permanent market insured by the development of a high-grade product of uniform quality. Dairying led to the renovation of the soil and to greatly increased values for land and these conditions reacted still more against the growing of wheat, until the latter industry was almost entirely driven from

the state. The tobacco crop played a similar, though far less important, part in the displacement of wheat growing in certain sections of the state, while insect pests and other causes contributed to the same result.

A considerable revival of wheat growing—at least according to the extensive method—appears unlikely in Wisconsin because of the relatively more exclusive advantages in that state for dairying than for the growing of wheat. Neither does investigation of the important dairy and wheat growing districts of New York and Ohio warrant the opinion that wheat growing may be again taken up in an important way, as incidental to dairying, since the two industries appear to be largely confined to separate regions in these two states. Other farm crops appear to be relatively more useful in that connection.

Lastly, it appears that, in accordance with past experience, we may expect a continued movement of the wheat growing area of the world generally, into the relatively less developed regions that are adapted to that crop, until the tendencies that operate toward the equalization of economic conditions between competing areas have worked out their ultimate effects; and such a consideration probably points to a relative decline in the extent of wheat growing within the United States as a whole for an indefinite period in the future.

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NOTE.—With the exception of the census reports, Federal and State, upon which the statistical part of the study is based, the most important original source of material is the *Transactions of the Wisconsin State Agricultural Society*, which constitute a mine of information illustrative of the agricultural development of the state. Next in importance come the *Reports of the Milwaukee Chamber of Commerce*. The *Annual Reports of the Wisconsin Dairymen's Association* and the *Bulletins of the Farmers' Institutes of Wisconsin* are especially valuable for the later period. The *Bulletins of the Agricultural Experiment Station of the University of Wisconsin*, especially those relating to the development of the dairy industry in Wisconsin, have been found of much use. The *Annual Reports* and the *Special Reports and Bulletins of the United States Department of Agriculture* have been found highly valuable for the purpose of comparison with respect to other parts of the United States. Especial mention should be made of the early bound volumes of the *Wisconsin Farmer* and the *Prairie Farmer*, the former being valuable for the local point of view and the latter for the West in general.

Frequent reference has been made to *Bulletin No. 24*, U. S. Department of Agriculture, Division of Statistics, from which the suggestion for this study was originally received. Hibbard's *History of Agriculture in Dane County, Wisconsin*, has been of constant assistance, especially in respect to the relations between wheat growing and other farm pursuits, and as a more intensive study of a particular section. Sanborn's *Congressional Grants in Aid of Railways* and Cary's *Organization and History of the O. M. and St. P. Railway Company*, are valuable in reference to the land grants and farm mortgages made to the railroads within the state. The works of Martin and Periam in reference to the farmers' movement are written with a strong bias. Both sides of the controversy are presented more satisfactorily in the columns of the *Atlantic Monthly* and the *North American Review* to which reference is made above. A history of the grange movement in the United States is in course of preparation by Mr. Solon J. Buck, as a Doctor's thesis, University of Wisconsin. The works of Gregory and Ritchie, relative to early conditions in Wisconsin, need to be used with care, and the same warning may be uttered with reference to some of the miscellaneous reports and to some of the county histories of Wisconsin to which only general reference has been made above. It has been thought unnecessary to make especial mention in the bibliography of a great number of the less important sources to which reference has been made in the text.

Appendix

TABLE I.
Per capita production of wheat in Wisconsin, by counties, in order of importance at the different census periods.
 [Federal census, 1849-1899; State census, 1904.]

Rank.	1849.		1859.		1869.		1879.		1889.		1899.		1904.	
	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.
1	Rock.....	37.1	Green Lake..	43.6	St. Croix....	74.6	St. Croix....	72.5	Buffalo.....	32.5	Buffalo.....	27.1	Buffalo.....	7.9
2	Walworth....	36.1	Columbia....	42.3	Buffalo.....	51.0	Buffalo.....	50.6	Calumet.....	23.4	St. Croix....	21.4	Kewaunee....	6.8
3	Kaneisha....	29.6	Dane.....	37.9	Buffalo.....	51.0	Tempsaleau..	47.4	Dodge.....	20.1	Calumet....	17.5	L'empaleau..	5.9
4	Dane.....	20.3	Rock.....	37.9	Dodge.....	48.8	Pierce.....	44.7	Washington..	19.1	Pierce.....	16.7	Door.....	4.4
5	Columbia....	17.4	Fond du Lac..	34.1	Tempsaleau..	47.7	Dodge.....	39.5	Pepin.....	17.9	Polk.....	16.3	Burnett.....	4.3
6	Green.....	17.1	Dodge.....	34.1	Dane.....	47.7	Washington..	39.5	Monroe.....	15.5	Door.....	13.6	Jackson.....	4.1
7	Dodge.....	17.1	Walworth....	20.5	Green Lake..	46.6	Green Lake..	31.5	Manitowoc...	15.4	Door.....	13.2	Pepin.....	3.6
8	Waushara....	16.2	Greene.....	23.8	Fond du Lac..	34.9	Green Lake..	29.6	Manitowoc...	15.4	Kewaunee...	12.9	Shawano....	3.4
9	Chippewa....	15.5	Kewaunee....	25.3	Pierce.....	33.2	Fond du Lac..	29.1	Verona.....	14.8	Jackson....	11.8	Pierce.....	3.4
10	Rock.....	14.5	Iowa.....	23.6	Polk.....	31.0	Calumet.....	28.7	Pierce.....	13.8	Manitowoc...	11.8	Monroe.....	3.2
11	Jefferson....	12.9	Lafayette....	22.5	Washington..	29.9	Calumet.....	28.7	Trepsaleau..	13.2	Monroe.....	10.5	Dodge.....	3.0
12	Fond du Lac..	11.5	Waushara....	21.7	Verona.....	29.6	Polk.....	27.8	Sauk.....	12.8	Monroe.....	10.5	East Claire..	2.8
13	Marquette....	9.9	Iowa.....	21.5	Monroe.....	28.7	East Claire..	26.8	Kewaunee....	12.5	Verona.....	9.9	Polk.....	2.8
14	Grant.....	7.8	La Crosse....	21.0	La Crosse....	28.6	Dunn.....	26.8	Verona.....	12.5	Shawano....	8.3	Vernon.....	2.3
15	Adams.....	6.8	Tempsaleau..	20.4	Calumet....	27.7	Crawford....	26.3	Richland....	12.3	Shawano....	8.3	Calumet....	2.3
16	Washington..	6.3	St. Croix....	20.2	Jackson....	27.6	Columbia....	24.5	Richland....	12.3	Crawford....	7.8	Dunn.....	2.3
17	Waushara....	5.3	Grant.....	19.7	Waushara....	24.6	Waushara....	24.1	Columbia....	11.3	Brown.....	7.8	Washington..	2.3
18	Lafayette....	5.3	Walworth....	19.1	Walworth....	23.3	Monroe.....	24.0	Jackson....	11.3	Dodge.....	7.8	Green Lake..	2.2
19	Columbia....	4.4	Waushara....	18.9	Waushara....	23.0	Vernon.....	23.4	Outagamie...	11.1	Dunn.....	6.7	Oconto.....	2.2
20	Calumet....	3.3	Pierce.....	18.9	Kewaunee....	23.0	Kewaunee....	23.2	Outagamie...	11.1	Burnett....	6.1	Manitowoc...	1.9
21	Shelbygan....	3.0	Verona.....	16.3	Green.....	22.9	Jackson....	21.8	Door.....	10.1	Sauk.....	5.1	Crawford....	1.9
22	Milwaukee....	2.9	St. Croix....	16.3	Lafayette....	22.5	Chippewa....	21.4	Polk.....	10.1	East Claire..	5.1	St. Croix....	1.8
23	Richland....	1.8	Waushara....	16.1	Rock.....	22.5	Crawford....	21.4	Polk.....	9.6	Green Lake..	5.1	Barron.....	1.8
24	Brown.....	1.0	Waushara....	15.4	Dunn.....	21.5	Manitowoc...	21.4	Jefferson....	9.2	Rond du Lac	5.1	Sauk.....	1.6
25	Calumet....	1.0	Washington..	15.3	Pepin.....	21.0	Sauk.....	20.4	Waushara....	7.9	Richland....	5.1	Marathon....	1.6
26	Jefferson....	1.5	Waushara....	14.5	Bank.....	20.5	Iowa.....	19.4	Waushara....	7.6	Washington..	5.0	Jefferson....	1.6
27	Madison....	1.4	Rock.....	14.5	Waushara....	20.1	Waushara....	18.2	Brown.....	7.4	Winnebago...	4.9	Jeanau.....	1.4
28	Jefferson....	1.3	Jefferson....	13.7	Portage.....	20.0	Winnebago...	17.5	Winnebago...	6.5	Oconto.....	4.8	Marquette..	1.3
29	Dunn.....	12.8	Jefferson....	13.2	La Crosse....	20.0	La Crosse....	17.5	Waushara....	6.3	Oconto.....	4.8	Chaukeo....	1.3
30	Adams.....	12.5	Adams.....	12.8	Adams.....	19.1	Richland....	17.2	Shelbygan....	6.2	Waushara....	4.4	Clark.....	1.2
31	Adams.....	12.5	Adams.....	12.8	Adams.....	19.1	Jefferson....	17.2	Marquette....	5.6	Marquette....	4.0	Waupaca....	1.2
32	Portage.....	12.5	Portage.....	12.5	Shelbygan..	19.0	Door.....	16.7	Dane.....	5.6	Marquette....	4.0	Waupaca....	1.2

32	Calumet.....	12.3	Marquette.....	17.9	Dane.....	16.6	Adams.....	5.5	La Crosse.....	3.8	Columbia.....	1.1
33	Waupaca.....	10.9	Waushara.....	17.8	Shawano.....	15.6	Dunn.....	5.3	Columbia.....	3.7	Iowa.....	1.1
34	Sheboygan.....	10.5	Kenosha.....	16.3	Barron.....	15.3	Walworth.....	5.2	Sauk.....	3.6	Lafayette.....	1.1
35	Richland.....	8.7	Chippewa.....	15.8	Waushara.....	13.7	Juneau.....	5.0	Juneau.....	3.5	Chippewa.....	1.0
36	Outagamie.....	8.5	Manitowoc.....	15.5	Walworth.....	12.8	La Crosse.....	5.0	Chippewa.....	3.1	Waushara.....	1.0
37	Juneau.....	8.2	Juneau.....	15.4	Grant.....	12.7	St. Croix.....	3.9	Adams.....	2.9	La Crosse.....	1.0
38	Chippewa.....	7.5	Crawford.....	14.6	Marquette.....	12.6	Portage.....	3.7	Portage.....	2.8	.....	.....
39	Peplin.....	7.0	Outagamie.....	13.6	Waupaca.....	12.0	Grant.....	3.6	Sheboygan.....	2.8	.....	.....
40	Ozaukee.....	6.7	Racine.....	12.7	Portage.....	11.5	Marathon.....	3.4	Marathon.....	2.4	.....	.....
41	Marquette.....	5.3	Waupaca.....	12.6	Adams.....	10.8	Oconto.....	3.2	Clark.....	2.3	.....	.....
42	Polk.....	5.2	Richland.....	12.1	Juneau.....	10.4	Lowa.....	3.2	Jefferson.....	2.2	.....	.....
43	Clark.....	4.8	Polk.....	12.0	Juneau.....	9.9	Kenosha.....	2.9	Washington.....	2.1	.....	.....
44	Crawford.....	4.3	Kewaunee.....	11.8	Brown.....	8.9	Racine.....	2.8	Washington.....	2.1	.....	.....
45	Manitowoc.....	2.0	Shawano.....	8.6	Green.....	8.8	Burnett.....	2.8	Grant.....	1.7	.....	.....
46	Milwaukee.....	1.9	Door.....	7.0	Rock.....	8.8	Clark.....	2.8	Wood.....	1.5	.....	.....
47	Brown.....	1.8	Brown.....	6.5	Racine.....	8.8	Rock.....	2.8	Dane.....	1.3	.....	.....
48	Shawano.....	1.5	Marathon.....	6.0	Lafayette.....	6.2	Portage.....	2.6	Green.....	0.9	.....	.....
49	Marathon.....	1.4	Burnett.....	5.7	Oconto.....	5.8	Barron.....	2.2	Marquette.....	0.8	.....	.....
50	Door.....	1.1	Clark.....	3.5	Kenosh.....	5.3	Green.....	1.8	Lincoln.....	0.8	.....	.....
51	.....	.....	Barron.....	3.0	Clark.....	4.2	Lafayette.....	1.4	Walworth.....	0.5	.....	.....
52	.....	.....	Milwaukee.....	2.6	Marathon.....	4.2	Wood.....	0.8	Walworth.....	0.5	.....	.....
53	.....	.....	Oconto.....	2.6	Marquette.....	1.9	Minnette.....	0.5	Lafayette.....	0.4	.....	.....
54	.....	.....	Wood.....	2.0	Lincoln.....	1.3	Milwaukee.....	0.2	Taylor.....	0.3	.....	.....
55	.....	.....	.....	.....	Wood.....	1.3	.....	.....	Kenosha.....	0.3	.....	.....
56	.....	.....	.....	.....	.....	.....	.....	.....	Racine.....	0.2	.....	.....
57	.....	.....	.....	.....	.....	.....	.....	.....	Rock.....	0.2	.....	.....
58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60	State.....	20.18	.....	24.28	.....	18.92	.....	6.34	.....	4.33	.....	1.21

1 Bad Axe.

TABLE II.

Production of wheat per square mile of improved land in Wisconsin, by counties, in order of importance, at the different Federal census periods (1849-1899.)

Rank.	1849.		1859.		1869.		1879.		1889.		1899.	
	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.	Counties.	Bush-els.
1	Kenosha	4,000	Green Lake	4,127	Buffalo	6,131	Fond du Lac	5,546	Calumet	2,045	Polk	1,582
2	Walworth	3,963	Dane	4,021	St. Croix	5,072	St. Croix	4,586	Buffalo	1,937	Buffalo	1,527
3	Rock	3,934	Dodge	3,967	Trempealeau	4,869	Polk	4,568	Kewaunee	1,761	Kewaunee	1,513
4	Marquette	3,434	La Crosse	3,881	La Crosse	4,730	Pierce	3,911	Outagamie	1,646	Door	1,396
5	Winnebago	3,038	Pierce	3,683	Pierce	4,730	Buffalo	3,911	Washington	1,592	Calumet	1,346
6	Dane	3,043	Buffalo	3,684	Dodge	4,966	Eau Claire	3,153	Manitowoc	1,587	St. Croix	1,346
7	Jefferson	2,704	St. Croix	3,588	Dane	4,046	Washington	3,154	Shawano	1,496	Pierce	1,335
8	Columbia	2,699	Columbia	3,569	Green Lake	4,046	Trempealeau	2,852	Dodge	1,933	Brown	1,324
9	Dodge	2,542	Kewaunee	3,528	Monroe	4,000	Kewaunee	2,917	Peplin	1,372	Manitowoc	1,242
10	Fond du Lac	2,411	Eau Claire	3,453	Columbia	3,839	Door	2,852	Monroe	1,236	Shawano	1,108
11	Rock	2,203	Fond du Lac	3,475	Jackson	3,812	Calumet	2,771	Brown	1,233	Burnett	991
12	Grant	2,041	Rock	3,473	Chippewa	3,778	Chippewa	2,668	Door	1,248	Peplin	870
13	Greene	2,016	Winnebago	3,450	Vernon	3,617	Calumet	2,668	Pierce	1,223	Monroe	835
14	Waushara	1,902	Iowa	3,163	Fond du Lac	3,617	Peplin	2,579	Green Lake	1,213	Waukegan	788
15	Iowa	1,883	Dunn	3,040	Eau Claire	3,617	Manitowoc	2,564	Outagamie	1,170	Jackson	778
16	Washington	1,845	Waukegan	2,944	Calumet	3,451	La Crosse	2,534	Winnebago	1,037	Trempealeau	774
17	Adams	1,800	Trempealeau	2,930	Peplin	3,451	Outagamie	2,534	Sauk	1,037	Winnebago	731
18	Chippewa	1,416	Jackson	2,783	Winnebago	3,123	Ozaukee	2,442	rond du Lac	1,019	Eau Claire	714
19	Lafayette	1,402	Monroe	2,654	Washington	3,116	Winnebago	2,442	Vernon	996	Outagamie	718
20	Sheboygan	1,402	Grant	2,654	Outagamie	3,005	Vernon	2,442	Polk	996	Barro	709
21	Calumet	1,232	Portage	2,563	Polk	2,930	Dunn	2,315	Jackson	996	Oconto	708
22	Milwaukee	1,100	Sauk	2,505	Dunn	2,911	Shawano	2,283	Richland	946	Vernon	699
23	Brown	688	Walworth	2,427	Iowa	2,901	Barro	2,276	La Crosse	891	Le Crosse	686
24	Richland	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
25	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
26	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
27	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
28	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
29	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
30	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
31	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
32	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
33	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
34	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
35	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
36	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
37	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
38	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
39	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686
40	Walworth	510	Walworth	2,427	Manitowoc	2,901	Monroe	2,276	Richland	891	La Crosse	686

34	Juneau	1,578	Waukegan	2,165	Columbia	1,556	Racine	542	Marinette	404
35	Green	1,790	Waukegan	2,163	Oconto	1,456	Burnett	497	Green Lake	388
36	Outagamie	1,767	Grant	2,137	Jefferson	1,356	Dunn	493	Forest	387
37	Richland	1,613	Brown	2,027	Crawford	1,344	Dunn	471	Richland	370
38	Marquette	1,604	Door	1,933	Marathon	1,232	Clark	446	Chippewa	368
39	Sheboygan	1,603	Waukegan	1,903	Waukegan	1,224	Dane	402	Clark	317
40	Polk	1,482	Jefferson	1,900	Iowa	1,166	Waukegan	402	Juneau	291
41	Racine	1,442	Marathon	1,869	Milwaukee	1,115	Chippewa	367	Portage	280
42	Jefferson	1,411	Adams	1,746	Marinette	1,089	Walworth	363	Jefferson	283
43	Shawano	1,362	Walworth	1,745	Dane	1,027	Lincoln	353	Sauk	269
44	Brown	1,317	Rock	1,737	Juneau	950	Milwaukee	346	Wood	238
45	Milwaukee	1,148	Milwaukee	1,638	Waukegan	840	Marinette	326	Columbia	236
46	Clark	1,128	Richland	1,673	Walworth	817	Marquette	306	Lincoln	234
47	Adams	1,101	Lafayette	1,591	Lincoln	785	Adams	294	Waukegan	213
48	Osaukee	1,053	Marquette	1,457	Grant	751	Harrison	278	Marquette	212
49	Mankowoc	1,030	Oconto	1,454	Racine	704	St. Croix	253	Milwaukee	173
50	Door	944	Green	1,382	Adams	680	Portage	241	Ouella	168
51	Marathon	917	Racine	1,245	Clark	618	Kenosha	230	Iron	150
52			Clark	902	Rock	571	Rock	218	Adams	139
53			Kenosha	864	Green	548	Grant	202	Taylor	119
54			Wood	849	Kenosha	436	Wood	186	Sawyer	117
55					Lafayette	237	Iowa	162	Dane	105
56					Wood	257	Green	78	Waukegan	104
57					Taylor	256	Lafayette	69	Grant	102
58						219			Priest	100
59									Iowa	82
60									Racine	69
61									Green	48
62									Walworth	44
63									Kenosha	38
64									Rock	23
65									Lafayette	19
	State	2,624		2,778		1,700		764		512

* Bad Axe.

TABLE III.

Index of specialization¹ in the production of wheat in Wisconsin, by counties, in order of importance, at the different Federal census periods, [1849-1899.]

Rank.	1849.		1859.		1869.		1879.		1889.		1899.	
	Counties.		Counties.		Counties.		Counties.		Counties.		Counties.	
1	Rock.	383	Green Lake	424	St. Croix	615	St. Croix	581	Buffalo	249	Buffalo	235
2	Walworth	390	Dane	401	Buffalo	539	Buffalo	481	St. Croix	219	St. Croix	170
3	Kenosha	314	Columbia	368	Trempealeau	494	Pierce	418	Calumet	174	Polk	161
4	Dane	332	Dodge	368	Dodge	472	Fond du Lac	401	Washington	174	Calumet	154
5	Columbia	215	Rock	363	Columbia	451	Trempealeau	374	Dodge	167	Pierce	150
6	Dodge	226	Fond du Lac	354	Dane	442	Washington	352	Polk	197	Kewaunee	140
7	Green	187	Kewaunee	323	Pierce	434	Dodge	338	Manitowish	196	Door	136
8	Marquette	184	Walworth	272	Green Lake	394	Polk	338	Monroe	150	Door	136
9	Jefferson	180	Buffalo	270	Jackson	371	Eau Claire	258	Monroe	141	Manitowish	130
10	Racine	179	St. Croix	270	La Crosse	355	Calumet	258	Outagamie	140	Brown	102
11	Fond du Lac	168	Iowa	258	Fond du Lac	371	Polk	261	Green Lake	135	Manitowish	101
12	Waukesha	166	Pierce	253	Monroe	339	Calumet	261	Outagamie	135	Manitowish	101
13	Winnebago	131	Winnebago	251	Winnebago	323	Ozaukee	249	Shawano	123	Shawano	97
14	Chippewa	132	La Crosse	244	Calumet	310	Dunn	241	Ozaukee	121	Monroe	83
15	Grant	109	Trempealeau	238	Washington	305	Chippewa	238	Sauk	119	Vernon	81
16	Adams	106	Kenosha	236	Iowa	300	Green Lake	236	Door	113	Burnett	77
17	Washington	101	Lafayette	224	Polk	231	Manitowish	234	Fond du Lac	113	Waukesha	71
18	Lafayette	85	Grant	224	Winnebago	230	Monroe	230	Richland	108	Crawford	65
19	Calumet	76	Waukesha	221	Dunn	250	Door	230	Jackson	104	Eau Claire	62
20	Shawano	70	Green	219	Chippewa	214	Door	219	Trempealeau	102	Barron	61
21	Shawano	47	Sauk	219	Grant	227	Jackson	217	Polk	99	Dodge	60
22	Richland	30	Jackson	216	Ozaukee	219	Outagamie	216	Brown	98	Winnebago	60
23	Brown	26	Monroe	197	Sauk	215	La Crosse	216	Crawford	96	Ozaukee	60
24	Monroe	191	Portage	183	Shawano	215	Winnebago	215	Columbia	88	Outagamie	59
25	Waukesha	183	Waukesha	183	Waukesha	209	Waukesha	208	Winnebago	84	Dunn	59
26	Portage	180	Walworth	176	Walworth	202	Sauk	201	Waukesha	79	Oconto	53
27	Washington	166	Washington	166	Outagamie	203	Shawano	189	Jefferson	75	Fond du Lac	50
28	Calumet	159	Manitowish	159	Rock	198	Barron	188	Sheboygan	74	La Crosse	47
29	Waukesha	145	Racine	145	Waukesha	196	Sheboygan	182	Waukesha	70	Green Lake	45
30	Waukesha	145	Waukesha	145	Waukesha	196	Crawford	170	La Crosse	67	Washington	45
31	Waukesha	145	Waukesha	145	Waukesha	196	Richland	167	Waukesha	55	Richland	36
32	Waukesha	145	Waukesha	145	Waukesha	196	Jefferson	153	Marathon	50	Washburn	36
33	Waukesha	145	Waukesha	145	Waukesha	196	Jefferson	153	Dunn	50	Marathon	35

TABLE IV.

Statistics of yearly production, acreage and yield per acre of wheat in Wisconsin.

Year.	PRODUCTION.			ACREAGE.			YIELD PER ACRE.	
	United States census.	Agricultural reports (U. S.)	Secretary of state's reports, (Wis.) and state census reports.	United States census.	Agricultural reports. (U. S.)	Secretary of state's reports, (Wis.) and state census reports.	Agricultural reports (U. S.)	State and Federal census Reports of sec. of state (Wis.)
	Bushels.	Bushels.	Bushels.	Acres.	Acres.	Acres.	Bushels.	Bushels.
1839†	212,116†					15,151†		
1840†								
1841		297,541						
1842		434,409						
1843		606,740						
1844		728,000						
1845		971,000						
1847		1,200,000						
1848		1,600,000						
1849	4,286,131				306,152			
1855		9,000,000 ¹	8,000,000 ²					
1856		12,000,000 ³	8,717,756*			521,393		16.7
1857		14,000,000 ³	2,959,321*			168,895		
1858			7,029,273*			603,811		
1859	15,657,458							
1860		29,738,716 ³	27,516,306		1,062,097 ³	1,112,630	28.0 ³	24.5
1861		15,000,000 ³						
1862		20,765,781			1,221,517		17.0	
1863		20,842,359			1,488,739		14.0	
1864		14,168,317	8,842,486*		1,491,401	1,063,338	9.5	8.3
1865		20,307,920	11,601,183*		1,208,805	883,592	16.8	
1866		20,307,920			1,400,546		14.5	
1867		22,000,000			1,788,617		12.3	
1868		22,660,000			1,743,076		13.0	
1869	25,606,344	24,000,000			1,568,627		15.3	
1870		20,485,000			1,528,731		13.4	
1871		18,436,000			1,511,147		12.2	
1872		22,307,000			1,559,930		14.3	
1873		26,322,000			1,595,273		16.5	

† Uncertain whether figures for crops of 1839 or crop of 1840. See *History and Growth of the United States Census*, by Carroll D. Wright and William C. Hunt, p. 32. [Washington, 1900.]

‡ *Report of the Milwaukee Chamber of Commerce*, 1862, p. 49. Uncertain whether the estimate is for the crop of 1839 or crop of 1840.

|| No estimates were made for the year 1846. See *Report of the Commissioner of Patents*, 1846 [House Exec. Doc. 29th Cong., 2nd Sess., vol. 3, No. 52, p. 8].

§ The estimates for the years 1841 to 1848 inclusive are from the Patent Office Reports. In reference to the lack of similar estimates for the years 1849 to 1861 inclusive, and for an unfavorable criticism of the estimates before 1849, see *Report of the Commissioner of Patents, Part II, Agriculture*, 1849, pp. 14-15.

¹ Wis. Farmer 1855, p. 234, gives yield from 9,000,000 to 10,000,000 bushels.

² Rep. Milwaukee Board of Trade.

³ Wis. Farmer, 1858, p. 50.

* Defective for acreage and yield.

TABLE IV—Continued.

Statistics of yearly production, acreage and yield per acre of wheat in Wisconsin.

Year.	PRODUCTION.			ACREAGE.			YIELD PER ACRE.	
	United States census.	Agricultural reports. (U. S.)	Secretary of state's reports, (Wis.) and state census reports.	United States census.	Agricultural reports. (U. S.)	Secretary of state's reports, (Wis.) and state census reports.	Agricultural reports. (U. S.)	State and Federal census reports of sec. of state. (Wis.)
	Bushels.	Bushels.	Bushels.	Acres.	Acres.	Acres.	Bush.	Bush.
1874..		18,436,000			1,608,130	1,794,919	11.5	.....
1875..		25,200,000			1,800,000	1,539,008	14.0	.....
1876..		16,800,000			1,866,666	1,612,932	9.0	.....
1877..		22,000,000	20,596,744		1,466,667	1,445,650	15.0	14.2
1878..		21,154,400	20,921,373		1,706,000	1,798,647	12.4	.....
1879..	24,884,689	20,565,720	21,040,238	1,948,160	1,632,200	1,775,665	12.6	.....
1880..		16,654,735	15,606,200		1,753,130	1,737,921	9.5	12.8
1881..		17,987,000	14,172,841		1,595,300	1,843,011	11.3	.....
1882..		23,145,400			1,610,000	1,101,463	14.4	.....
1883..		19,604,900	15,493,219		1,593,900		12.3	.....
1884..		20,083,000	21,033,008		1,434,510	1,109,721 ¹	14.0	17.2
1885..		15,665,000	12,955,456		1,362,785		11.5	.....
1886..		14,725,000			1,281,018	1,012,579	11.5	.....
1887..		13,063,000	9,943,487		1,268,208		10.3	.....
1888..		13,855,000			1,204,798	753,111	11.5	.....
1889..	11,698,922	16,937,000	9,866,322	744,060	1,192,750		14.2	15.7
1890..		13,096,000			1,078,475	726,458	12.2	.....
1891..		13,043,000	9,457,132		966,128		13.5	.....
1892..		8,814,000			766,429	707,457	11.5	.....
1893..		8,694,485	8,063,627		661,465		13.3	.....
1894..		9,396,178 ²	8,565,071		567,647	464,512 ³	16.5	18.2
1895..		8,616,218	4,343,008		555,885		15.5	.....
1896..		8,898,950	4,542,263		669,094	397,631	13.8	.....
1897..		7,690,775	5,463,800		615,262	366,732	12.5	.....
1898..		13,689,972	9,072,168		760,554	566,668	18.0	.....
1899..	9,005,170	11,773,382	7,208,338	556,614	759,373	510,572	15.5	16.2
1900..		13,166,599	6,084,506		849,458	478,259	15.5	.....
1901..		7,576,874			469,920	432,758	16.1	.....
1902..		9,655,094			532,104		18.1	.....
1903..		8,365,385			534,589		15.6	.....
1904..		7,483,538	2,700,813		483,006	210,010	15.5	12.9

¹ 1,221,313 according to the *State Census*.² Report, No. 120, New Series (Oct. 1894) U. S. Dept. of Agric., Division of Statis., II: 629 for estimate of yield of wheat per acre in Wisconsin in 1894. Report No. 122, Doc., 1894. *Ibid.* 723, for estimate of acreage and total yield in Wisconsin in 1894.³ 471,163 according to the *State Census*.

TABLE V.

Average yield of wheat per acre in Wisconsin, by counties; *Report of Secretary of State of Wisconsin*, for the years 1856, 1860, 1864, and 1877; *Federal Census* for 1879, 1889 and 1899; *State Census* for 1884, 1894 and 1904.

COUNTIES.	BUSHELs.									
	1856*	1860	1864†	1877	1879	1884	1889	1894	1899	1904
Adams.....		19.4	4.7	8.8	10.3	13.4	13.1	12.4	13.1	8.8
Barron.....				16.6	12.2	14.6	12.9	12.1	17.2	16.8
Brown.....	15.4	26.3	7.6	12.3	13.5	17.3	15.6	14.0	15.0	10.5
Buffalo.....	19.5*	17.1	13.0	14.5	12.1	15.4	16.6	19.1	16.1	11.2
Burnett.....			25.0	15.6	13.5	14.5	14.2	9.8	17.0	13.5
Calumet.....	20.5	13.7	10.1	15.8	12.4	19.5	19.2	19.6	19.2	10.8
Chippewa.....			11.6	20.5	11.5	16.2	14.7	11.8	16.7	13.4
Clark.....			12.8	12.6	12.5	18.4	18.8	19.5	18.6	15.0
Columbia.....	17.2	22.0	7.6	13.7	10.5	17.1	15.1	17.9	16.7	12.0
Crawford.....	12.4	19.1	7.4	12.9	12.7	13.8	13.2	16.1	14.1	9.4
Dane.....	17.1	23.1	6.1	12.0	9.8	17.5	13.5	16.0	13.8	13.9
Dodge.....	16.1	24.3	9.9	13.1	13.3	18.4	16.6	22.7	20.0	13.9
Door.....	25.0*	17.6	16.2	21.7	16.1	17.9	12.9	14.7	14.4	10.1
Dunn.....	14.5	21.0	10.1	15.0	10.9	15.5	15.4	16.4	14.8	15.4
Eau Claire.....		24.5	11.3	15.8	12.4	15.2	15.6	13.7	14.8	14.1
Fond du Lac.....	19.1	23.2	10.6	14.7	12.2	18.7	16.3	21.9	19.2	13.2
Grant.....		21.2	6.7	8.9	11.5	14.4	11.6	15.7	13.0	11.2
Green.....	15.9	22.4	5.1	9.6	16.4	17.5	11.7	22.4	18.3	15.0
Green Lake.....		26.0	8.9	11.7	11.2	14.8	14.4	16.5	14.4	11.3
Iowa.....	17.8	19.9	4.2	12.0	15.5	15.4	12.8	17.0	13.2	13.6
Jackson.....	16.9	25.0	10.4	13.5	10.2	15.5	17.8	23.1	16.9	12.6
Jefferson.....	15.1	23.9	9.5	12.2	16.0	19.7	16.4	24.2	19.0	15.1
Juneau.....	16.8	22.3	6.5	9.5	15.0	15.5	16.1	17.1	15.8	14.8
Kenosha.....	16.5	27.0	6.7	7.9	14.0	19.2	13.5	17.1	19.2	17.3
Kewaunee.....				11.4	13.5	17.8	13.4	13.8	14.2	9.7
La Crosse.....		22.0	15.0	12.0	11.3	14.9	17.5	19.1	16.7	13.1
Lafayette.....	17.8	12.5	4.0	7.7	14.5	16.2	9.9	18.6	15.2	14.4
Langlade.....					12.2	17.0	16.3	18.7	17.7	19.5
Lincoln.....					11.7	20.1	16.0	17.0	15.4	12.7
Manitowoc.....	18.6	19.8	10.9		13.2	17.0	15.1	16.6	16.0	11.9
Marathon.....		17.6	7.0	14.8	10.4	17.8	15.3	13.7	14.0	15.6
Marinette.....					16.8	18.5	13.5	18.0	15.0	13.6
Marquette.....	14.7	19.9	4.5	8.3	10.1	11.4	11.4	11.5	13.8	10.4
Milwaukee.....		26.0	8.5	13.5	16.2	21.2	17.9	20.4	21.2	18.3
Monroe.....	18.8	19.8	11.9	12.8	13.1	14.1	17.5	18.5	17.5	13.3
Oconto.....		21.1	11.6	11.1	13.8	18.2	14.3	17.5	15.3	12.4
Outagamie.....	18.9		8.3	48.9*	18.5	20.3	19.6	30.8	14.6	11.2
Osaukee.....		22.2		21.2	13.3	20.2	15.6	18.3	19.5	14.2
Pepin.....		19.9	13.8	11.2	12.0	16.7	16.8	17.0	17.2	15.3
Pierce.....		23.4	12.3	17.4	13.0	19.0	18.6	17.0	16.3	16.6
Polk.....		16.8	11.1	4	14.4	18.3	16.3	10.1	15.5	18.9
Portage.....		20.0	6.5	10.3	9.4	14.9	12.6	12.0	13.5	9.9
Racine.....	15.9	51.3	6.0	11.7	15.6	19.3	14.6	16.3	18.6	17.5
Richland.....	14.3	17.6	10.8	15.6	15.2	13.6	14.4	16.0	13.1	11.8
Rock.....	16.8	23.7	5.7	14.5	14.7	18.8	11.6	19.2	19.9	15.6
St. Croix.....	15.1	21.7	12.7	16.5	12.4	18.2	15.6	10.6	14.4	15.4
Sauk.....		24.1	6.4	12.5	15.2	17.2	17.5	19.5	14.8	12.9
Shawano.....	7.5	18.0	14.8	4	13.1	17.0	15.2	22.4	16.1	12.5
Sheboygan.....	19.9	21.4	11.0	14.5	13.4	18.3	16.4	21.5	17.9	11.9
Trempealeau.....	19.7	23.4	13.8	15.0	11.2	15.3	17.1	20.0	17.3	13.4
Vernon.....		26.3	10.7	12.5	12.8	15.0	16.3	19.4	15.3	11.9
Walworth.....	16.0	27.2	6.4	11.8	12.8	19.7	10.9	18.2	15.4	20.1
Washburn.....						20.0				15.1
Washington.....	16.8	22.5	9.1	13.3	15.7	18.4	16.8	20.8	17.2	12.2
Waukesha.....	16.7	25.6	6.5	12.7	16.9	20.2	14.3	19.4	17.0	17.7
Wanpaca.....		20.4	6.2	11.2	11.6	17.2	16.9	20.7	19.8	13.5
Waushara.....	12.7	17.7	6.0	10.3	10.4	12.8	14.6	13.2	14.4	20.8
Winnebago.....	17.4	24.6	6.4	15.4	14.4	17.6	18.2	18.9	18.2	11.8
Wood.....				7.1	9.0	16.5	17.1	18.6	15.0	13.6
State.....	16.7	24.5	8.3	14.2	12.8	17.2	15.7	18.2	16.2	12.8

* "So imperfect as to be almost worthless," *Rep. Sec. State*.

† The report for 1856 gives the figures 1.95 but as this appears to be a typographical error, the figures 19.5 are substituted.

‡ The entire yield for this county for this year was 200 bushels.

§ Census defective.

¶ It is questioned whether or not this number is a misprint.

* Defective.

TABLE VI.

Total production of wheat in the United States, 1839 to 1849, 1853, 1859, and 1862 to 1904 [calendar years].

	Bushels.		Bushels.
1839†	{ 84,823,272*	1878.	420,122,400
1840		1879	{ 448,766,630
1841	91,642,967		{ 459,485,137*
1842	102,317,840	1880.	498,549,868
1843	100,310,856	1881.	383,280,090
1844	95,697,000	1882.	504,185,470
1845	106,548,000	1883.	421,086,160
1847.	114,245,500	1884.	512,765,000
1848.	126,364,600	1885.	337,112,000
1849.	100,485,944*	1886.	457,218,000
1853	110,000,000†	1887.	456,329,000
1859.	{ 171,183,381†	1888.	415,868,000
	{ 173,104,924*	1889.	{ 490,560,000
1862.	169,993,500*		{ 468,378,968*
1863.	{ 191,068,239*	1890.	399,202,000
	{ 173,677,928*	1891.	611,780,000
1864.	160,695,823*	1892.	515,949,000
1865.	148,552,829*	1893.	399,131,725
1866.	151,999,906*	1894.	460,267,416
1867.	212,441,400	1895.	467,102,947
1868.	224,036,600	1896.	427,684,346
1869.	{ 260,146,800	1897.	530,149,168
	{ 289,745,629*	1898.	675,148,705
1870.	235,884,700	1899.	{ 547,303,846
1871.	230,722,400		{ 658,534,252*
1872.	249,967,100	1900.	522,229,505
1873.	281,254,700†	1901.	748,460,218
1874.	308,102,700	1902.	670,063,008
1875.	292,136,000	1903.	687,821,835
1876.	289,356,500	1904.	552,399,517
1877.	364,194,146		

† The figures opposite are from the *Sixth Census*, but it is uncertain whether they are for the crop of 1839 or for the crop of 1840. See *History and Growth of the United States Census*, by Carroll D. Wright and William C. Hunt, p. 32 [Washington, 1900]. For alleged gross inaccuracies in the Sixth Census, see *House Reports*, 28th Cong., 1st Sess., vol. III, No. 580.

* *United States Census*.

† No estimates were made for the year 1846. See *Patent Office Report* for 1846 [*House Exec. Doc.*, 29th Cong. 2nd Sess., vol. 3, No. 52, p. 8].

|| The estimates for the years 1841 to 1848 inclusive are from the Patent Office Reports for those years. In reference to the lack of similar estimates for the years 1849 to 1861 inclusive (except 1853), see *Report of the Commissioner of Patents, Part II, Agriculture*, 1849 pp. 14-15.

† Pat. Office Rep., *Agriculture*, 1853, p. 129.

* *Rep. of Com. of Agric. (U. S.)* for 1862, p. 10.

* *Ibid.* for 1863, p. 3.

* *Ibid.*

* *Ibid.* for 1864, p. 577.

* *Ibid.* for 1864.

* *Ibid.* for 1865.

* *Statist. Abstract of the United States*, 1905, p. 516, for statistics of years 1866 to 1904.

* Given 281,254,700 in the *Statist. Abstract of the United States*, 1878, p. 153, and in the *Rep. of the Com. of Agric. for 1873*, p. 26.

TABLE VII.

Mileage of railroads in Wisconsin by years [*Wisconsin Blue Book* for 1905, p. 1,004]:
yearly receipts and shipments of wheat and flour and yearly manufacture of flour
at Milwaukee. [*Reports of the Milwaukee Chamber of Commerce*, and the *American Railroad Journal*]

Years.	Mileage of railroads in Wisconsin. By years.	Receipts of wheat at Milwaukee. [Bushels.]	Shipments of wheat from Milwaukee. [Bushels.]	Receipts of flour at Milwaukee. [Barrels.]	Shipments of flour from Milwaukee. [Barrels.]	Manufac- ture of flour at Milwaukee. [Barrels.]
1845			95,510		7,550	
1846			213,448		15,756	
1847			598,911		34,840	
1848			602,474		92,732	
1849			1,136,023		136,657	
1850			297,578		100,017	
1851	35.5		317,285		51,889	
1852	71.5		564,404		92,995	
1853	90.1		956,703		104,055	
1854	151.9		1,809,452		145,033	
1855	318.8		2,641,746		181,509	130,000
1856	507.7		2,761,979		188,415	116,000 ¹
1857	700.2		2,581,311		228,422	
1858	761.6	4,876,177	3,994,213	206,129	208,638	150,107
1859	849.5	5,580,681	4,634,227	239,952	282,952	142,500
1860	880.7	9,108,458	7,568,608	305,202	457,543	202,810
1861	900.7	15,930,706	13,300,495	518,800	674,474	250,256
1862	957.2	15,613,995	14,915,680	529,600	711,405	221,729
1863	957.2	13,485,419	12,837,620	453,424	603,526	185,813
1864	1,030.3	9,147,274	8,992,479	295,225	414,833	187,339
1865	1,030.3	12,043,659	10,479,777	389,771	567,576	212,829
1866	1,030.3	12,777,567	11,644,749	495,901	720,365	328,730
1867	1,030.3	12,523,464	9,598,452	502,252	921,663	546,000
1868	1,089.0	12,761,648	9,878,089	567,358	1,017,598	625,000
1869	1,141.0	17,745,238	14,272,799	807,763	1,220,058	481,511
1870	1,286.4	18,883,837	16,127,838	824,799	1,225,941	550,049
1871	1,798.3	15,686,611	13,409,467	796,782	1,211,427	567,893
1872	1,975.4	13,617,939	11,570,575	834,202	1,232,036	560,206
1873	2,379.0	28,457,937	24,094,266	1,254,821	1,805,200	634,102
1874	2,465.9	25,628,143	22,255,580	1,616,338	2,217,379	735,481
1875	2,513.9	27,878,727	22,681,020	1,443,801	2,163,346	744,126
1876	2,647.6	18,174,817	16,804,394	2,082,638	2,654,028	647,581
1877	2,707.7	19,814,949	18,298,485	1,930,440	2,286,426	61,201
1878	2,798.0	21,763,312	17,254,453	2,288,303	2,680,022	555,049
1879	2,909.9	19,649,352	15,060,222	2,424,673	2,983,439	752,133
1880	3,120.2	11,756,463	9,952,629	2,419,176	2,805,878	637,157
1881	3,425.2	10,176,098	7,992,665	3,376,296	4,034,288	859,388
1882	3,702.5	8,058,422	2,193,539	3,354,304	4,248,054	1,346,509
1883	3,895.6	9,278,922	3,109,439	3,370,799	3,960,596	879,512
1884	4,259.5	13,193,922	7,187,838	4,076,871	4,601,297	1,070,860
1885	4,336.4	12,658,559	8,235,977	3,796,185	4,354,144	961,152
1886	4,746.5	11,120,575	7,430,766	4,730,702	5,078,614	952,802
1887	5,082.6	14,237,251	14,093,875	3,952,685	4,912,843	1,214,648
1888	5,272.0	8,129,315	2,691,076	2,427,336	3,410,289	1,421,258
1889	5,389.5	7,469,289	1,882,980	2,579,800	3,253,426	1,266,226
1890	5,471.7	8,046,461	1,952,122	2,401,235	3,201,613	1,397,039
1891	5,548.6	10,846,495	2,764,412	2,537,273	3,812,211	1,826,758
1892	5,784.6	15,205,659	3,709,509	2,685,353	4,310,065	2,117,000
1893	5,925.5	12,866,319	3,491,037	1,873,169	3,061,275	1,850,823
1894	6,003.7	8,101,616	805,042	2,209,403	3,163,271	1,576,064
1895	6,176.8	9,697,379	2,752,705	2,693,270	3,375,553	1,532,510
1896	6,193.3	9,336,086	2,537,173	3,196,950	4,598,013	1,628,140
1897	6,205.0	9,526,878	2,029,999	2,448,449	3,924,800	1,753,020
1898	6,284.1	13,539,840	4,900,872	2,579,905	3,824,152	1,741,547
1899	6,487.2	12,345,383	3,787,072	3,165,105	3,978,078	1,737,526
1900	6,592.0	10,848,939	2,166,451	3,012,625	3,788,658	1,866,501
1901	6,725.1	13,050,850	4,111,622	2,919,390	4,034,928	1,939,966
1902	6,987.7	10,360,593	2,338,969	3,681,400	4,409,899	1,755,051
1903	6,862.2	9,031,615	1,710,156	3,337,985	4,112,784	1,445,430
1904	6,923.3	8,427,256	2,132,892	2,301,705	3,098,421	1,320,611

¹ Exclusive of custom milling.

TABLE VIII.

Range of quotations for the price of wheat at Milwaukee, during the months of January, April, July, and October, 1858-1904. [No. 1 spring, 1858-1868; No. 2 spring,* 1869-1897; No. 1 northern spring, 1898-1904 (*Forty-seventh Annual Report of the Trade and Commerce of Milwaukee*, 1904, pp. 80-82)].

	1858.	1859.	1860.	1861.	1862.	1863.
January.....	55-60	77-112	99-102	75-82	70-75	100-131
April.....	60-66	100-113	98-115	83-84	77-86	115-122
July.....	66-75	59-95	90-112	74-83	81-97	100-116½
October.....	65-88	72-85	85-94	73-81	89-104½	102-118

	1864.	1865.	1866.	1867.	1868.	1869.
January.....	115½-121½	142-177	121½-132	205-221	199-207½	110-118½
April.....	114½-134	98-121½	126-166½	245-285	196-209½	102½-110
July.....	202-226	101-131½	157½-211½	205-240	180½-196½	124-140
October.....	137-186½	132½-145½	196-229	185-200	123½-139½	91½-107

	1870.	1871.	1872.	1873.	1874.	1875.
January.....	75½-84½	108½-132	120½-124	119-127½	117-126½	83½-90½
April.....	73-94½	121½-132	119½-137	116-129½	124½-131	94-106½
July.....	106½-135	106½-124½	118½-127½	118-127	109½-121½	104½-133
October.....	98½-110½	117-127	106½-122	100-112	84-96½	108-115

	1876.	1877.	1878.	1879.	1880.	1881.
January..	97½-102½	128½-133½	102½-110½	82½-87	114½-130½	95½-98½
April.....	99½-106½	134½-190	106½-115½	86½-98½	102-113	98½-108½
July.....	90-106	124-158½	94-130	88½-102½	89½-100½	110½-117½
October.....	107-118	108½-116	77½-89½	104-121½	93½-102½	130-145

* With the disappearance of quotations for No. 2 spring wheat after 1897, the price statistics are of less significance for the purposes of this study than would otherwise have been the case, as No. 1 northern spring wheat represents a grade of wheat superior to that grown in Wisconsin in recent years.

TABLE VIII.—Continued.

	1882.	1883.	1884.	1885.	1886.	1887.
January.....	128 -140%	93 -103%	87½-95½	74½-80½	77 -84½	77½-80½
April.....	126 -135	101½-110%	79½-96	74½-91½	76 -80½	76½-78½
July.....	106 -129%	95½-103½	78½-85½	85½-89½	73 -81½	68 -72½
October.....	92½-96½	90 -95½	71½-77½	85 -91½	69½-74½	69½-71

	1888.	1889.	1890.	1891.	1892.	1893.
January.....	75½-77½	87 -94½	69½-72½	82½-93½	80½-85½	64½-67½
April.....	73 -80½	77½-88½	72½-84½	98½-114½	76½-84½	62½-66½
July.....	74½-84	76½-81	83 -91½	86½-93½	72 -77½	55 -64½
October.....	98½-115½	71½-74½	92½-108½	87½-94	64 -69½	57½-61½

	1894.	1895.	1896.	1897.	1898.	1899.
January.....	58½-61½	50½-55½	56½-63	73½-79½	89 -98	68½-76½
April.....	55½-61½	55½-65½	61½-67½	68 -80	98 -117	70½-75
July.....	50 -56	62½-73½	54½-59½	70 -81	86 -90	71½-76
October.....	52½-55	56½-60½	64 -77	82 -89	62½-70½	69 -74½

	1900.	1901.	1902.	1903.	1904.
January.....	63½-69	74 -78½	75½-81½	75½-82½	86½-91
April.....	66 -68½	71 -76	72 -78	77 -81½	94 -102
July.....	75 -83	66 -73	76 -80	85½-90	98 -103
October.....	74½-81½	68½-71½	72 -75½	82½-87	112 -120

TABLE IX

Range¹ of quotations for the price of wheat at Chicago during the months of January, April, July, and October, 1840-1904. [No. 2 Spring, 1840 to April, 1858, inclusive, (*Senate-Aldrich-Committee, Report on Wholesale Prices, Wages and Transportation*, 1893, Pt. II, pp. 60-61); No. 1 Spring, July, 1858 to 1868, inclusive, and No. 2 Spring, 1869 to 1878, inclusive (*Trade and Commerce of Chicago, Reports 1858-1878*); No. 2 cash (contract) wheat,² 1879-1904, (*Report of the Trade and Commerce of Chicago for 1904*, p. 9.)]

	1840.	1841.	1842.	1843.	1844.	1845.
January.....		38-50		20-35		
April.....	38-50	37-44		40-44	50-63	
July.....	38-50	50-56		70-75	50-58	52*
October.....						

	1846.	1847.	1848.	1849.	1850.	1851.
January.....			65-70	55-58	45-55	50-60
April.....			75-82		55-63	50-58
July.....	40†	40-55	85-90	36-65	90-100	
October.....		50-66	50-58	50-90	46-53	

	1852.	1853.	1854.	1855.	1856.	1857.
January.....	31-42	70-76	92-9½	108-120	115-120	85-87
April.....	34-40	55-65	100	135-145		84-88
July.....	37-39	66-75	95-100	150-155	100	126-127
October.....	48-56	94-100	90-105	129-130	102-103	78-77

	1858.	1859.	1860.	1861.	1862.	1863.
January.....	53½-55	75-105	99-102	80-80½	70½-72½	100-120
April.....	61½-63	100-105	108½-115	83-86	74½-79	116-119½
July.....	66-73	70-107	92-110	58-72½	81-83½	100-114
October.....	71	76-88	81-89	70½-80	88-101	103-118½

	1864.	1865.	1866.	1867.	1868.	1869.
January.....	116-120	148-179	119-131	212-221	193-215	112-118½
April.....	115-131½	102-120	125-162	257-300	202-220	101½-115
July.....	196-220½	104-129	138-195	198-235	180-200	119½-139
October.....	150-182	137-146½	208-222½	185-208	117½-150	92-112

¹ Occasionally but one quotation appears.

² From 1879 to 1897 the quotations for cash contract wheat approximate the quotations for No. 2 Spring wheat, and this is especially true of the minimum prices. On account of the elimination of this grade of wheat from the class of contract wheat in 1897, however, the quotations from 1898 to 1904 have less significance for the purposes of this study than would otherwise have been the case. [See *Report of the Trade and Commerce of Chicago for 1897*, pp. XXXVIII-XXXIX.]

* Average for the year 1845†

† Average for the year 1846†

TABLE IX.—Continued.

	1870.	1871.	1872.	1873.	1874.	1875.
January.....	75 - 84	108½-129½	120½-125	119½-126	114 - 126½	88 - 90½
April.....	78½- 94½	121 - 132	119½-136½	114 - 125	119½-128	93 - 105½
July.....	102½-131½	109 - 129	120 - 132	114½-123½	108 - 117½	99½-128½
October.....	97 - 112½	112½-124	108½-121	93 - 109½	81½- 99½	107½-113½

	1876.	1877.	1878.	1879.	1880.	1881.
January.....	95 - 102½	124½-131	102½-109½	81½- 87½	114 - 132½	95½-100
April.....	95½-105½	128 - 175	105½- 114	83½- 91½	105½-114½	99½-105½
July.....	83 - 105½	127 - 148½	89 - 105½	88½-104½	86½- 96½	108½-122
October.....	105½-116	106½-114½	77 - 87½	104½-121½	92½-101½	130 - 143½

	1882.	1883.	1884.	1885.	1886.	1887.
January.....	125½-135½	93½-104½	88½- 96½	76 - 81½	77 - 84½	77½- 80½
April.....	132 - 142	99 - 112½	75½- 94½	77½- 91½	72½- 80½	76½- 83½
July.....	128 - 136	96½-109½	79½- 84½	85½- 90½	73 - 79½	67½- 71½
October.....	92½- 97	89½- 96½	70½- 74½	84½- 91½	69½- 74½	69½- 72½

	1888.	1889.	1890.	1891.	1892.	1893.
January.....	75½- 78½	92 - 102½	74½- 78½	87½- 96½	84½- 90½	72 - 78½
April.....	71 - 81½	79½- 98½	77½- 90	102 - 112½	76½- 85½	70½- 88
July.....	79½- 85½	76½- 85	85 - 94	84½- 94½	76 - 80	54½- 66½
October.....	102½-117½	77½- 82½	96½-103½	92½- 99	69½- 74½	60½- 66½

	1894.	1895.	1896.	1897.	1898.	1899.
January.....	59½- 63	48½- 55	55½- 68½	73 - 81	89½-110	66½- 76
April.....	57½- 63½	53½- 63½	61½- 71	66½- 77½	101 - 123½	70 - 76½
July.....	50½- 58½	61½- 71½	54½- 62½	68½- 78½	65½- 88	68½- 75½
October.....	50½- 52½	57½- 61½	65½- 81½	83 - 97	62 - 70½	68½- 74½

	1900.	1901.	1902.	1903.	1904.
January.....	61½- 67½	71½- 76½	74 - 80½	70½- 79½	81½- 93½
April.....	64½- 67½	69½- 74½	70 - 76½	71½- 79	85½- 96½
July.....	74 - 81½	63½- 71½	71½- 79	75 - 84	94½-112
October.....	71½- 77½	66½- 71½	67½- 75½	76½- 88	109½-122

TABLE X

Price of wheat¹ at New York City for the months of January, April, July, and October, 1840-1904 [No. 2 spring, 1840-1861 inclusive (Senate—Aldrich—Committee, *Report on Wholesale Prices, Wages and Transportation*, 1893, Pt. II, pp. 62-63); Milwaukee Club, 1862-1882 inclusive (Reports *New York Produce Exchange*); No. 2 spring, 1883-1891 inclusive (Aldrich report as above); No. 1 northern spring, 1892-1904 (*New York Produce Exchange*).]

	1840.	1841.	1842.	1843.	1844.	1845.
January.....	108-110	98-100	125	87½- 89	96	95- 98
April.....	107-108	90-100	125	90 - 95	101	97-100
July.....	98	117	123	102 -108	97-100	100-105
October.....	100	140	75- 85	90 - 98	87- 90	90- 96

	1846.	1847.	1848.	1849.	1850.	1851.
January.....	124	115	120-130	108-112	95-112	105-100
April.....	110-115	135-140	125-129	100-102	100-112	95-100
July.....	85- 95	160-180	115-120	100-103	115-120	98- 97½
October.....	85- 90	114-119	112-115	96-112	88-105	78- 85

	1852.	1853.	1854.	1855.	1856.	1857.
January.....	100-105	132	187½-195	230-237½	177	170
April.....	106-110	120-122	180 -195	228-230	165-176	158
July.....	97-100	120-122	175 -210	200-210	145	157
October.....	104-105½	146-150	160 -170'	168-177	140-145	105-112

	1858.	1859.	1860.	1861.	1862.	1863.
January.....	110-115	120	130	118-122½	132	145
April.....	115	138	122	125-127½	126½	152½
July.....	80- 90	109	128	72- 89	113	123½
October.....	108	125	115-118	115-119	124	134

	1864.	1865.	1866.	1867.	1868.	1869.
January.....	153½	220	176	246	249	165
April.....	171	161	177	264	257	147½
July.....	242½	138½	219	241	190½	156
October.....	190	176½	239	231	174	140½

¹ The quotations from 1862 to April, 1875, represent *average* prices; from July 1875 to 1882 inclusive, the minimum and maximum quotations are *average* minimum and maximum quotations. In comparing New York City prices with Chicago and Milwaukee prices, account must be taken of the fact that the former are thus, in part, *average* prices.

Satisfactory quotations for Milwaukee Club or for Milwaukee or Chicago No. 2 spring wheat at New York City are not available after 1882.

The quotations for No. 1 northern spring from 1892 to 1896 are for wheat "delivered"; from 1897 to 1904 the prices are for wheat "f. o. b."

TABLE X.—Continued.

	1870.	1871.	1872.	1873.	1874.	1875.
January.....	122	152½	155¼	167½	1627/10	113½
April.....	117	158	158½	166½	159½	122½
July.....	141½	142½	151½	145½	135½	130¼-1309/10
October.....	132	153½	176½	140½	111	130¼-131½

	1876.	1877.	1878.	1879.	1880.	1881.
January.....	123¼-124	144½-146½	131	1019½	141¼-142¾	116½-117
April....	125½-128	167½-169	127½-1279/10	103½	125¼-128	1229/10
July....	103-106½	163½-165½	1059/10-107¾	110¼-113	110½	121¼-1229/10
October....	125½-128½	132½-133½	977/10*	134-1357/10	1121½	140

	1882.	1883.	1884.	1885.	1886.	1887.
January.....	140	110	107	86	92½	91-93
April....	142½-142½	102-113	98½	90½	91½	91½-93½
July.....	128½-129 7/10	108	90-90½	94½-95	81½	83½-85½
October.....	106½-112	104	85½	90-91	83½	80-81

	1888.	1889.	1890.	1891.	1892.	1893.
January.....	87½-92½	108-110½	78½-86	104½	101½-108½	82½-87
April.....	84½-84½	95-100	89-91	111	92½-101½	80½-85½
July.....	89½-89½	89½-90	91	103½-103½	84½-90½	65½-73½
October.....	105-107½	77-89	100-103½	104½-105	79½-84½	68½-74½

	1894.	1895.	1896.	1897.	1898.	1899.
January.....	70½-74½	65½-72½	66½-74½	83½-96½	100-112½	77½-87½
April.....	68½-74	67½-76½	71½-76½	76½-89½	106-134	81½-87½
July.....	62½-69½	70-79½	61½-67½	76½-90	82-95	76½-83½
October.....	62½-66½	64½-68½	72½-86½	94½-108	69½-80½	77½-83½

	1900.	1901.	1902.	1903.	1904.
January.....	75-80½	82½-88½	83½-90½	85-91½	96½-101½
April.....	75½-80	81½-90½	79½-86½	85½-90½	96½-106½
July.....	81-92	72½-80½	79½-84½	90½-96½	99½-110½
October.....	80½-88½	73½-78½	78-84½	88½-93½	118½-131

* This quotation is for September, 1878.

TABLE XI.

Per capita production of barley in the counties of the wheat area in Wisconsin, producing one bushel or more per capita.

[Federal Census, 1840 to 1890.]

Counties.	1840. Bushels.	1850. Bushels.	1860. Bushels.	1870. Bushels.	1880. Bushels.	1890. Bushels.
Adams						1.3
Barron				4.4		1.9
Brown				1.4	1.6	3.1
Buffalo		2.1	4.0	3.3	4.4	14.6
Calumet			1.0	9.4	24.1	68.8
Chippewa			1.4	2.6		1.6
Clark						1.9
Columbia		1.3	1.8	5.3	24.3	9.8
Crawford				1.8	1.8	
Dane	1.1	1.4	2.8	9.0	14.9	5.8
Dodge		1.9	2.0	9.4	61.1	73.8
Door				1.3	1.5	2.2
Dunn			2.1	2.7		3.4
Eau Claire			1.7	1.1	1.0	3.0
Fond du Lac		1.4	1.3	6.7	24.1	49.0
Grant			1.1	1.4	1.0	3.5
Green					1.6	3.5
Green Lake		1.7	1.4	2.4	17.5	16.1
Iowa			1.6	1.7		1.6
Jackson			1.9	4.9		1.8
Jefferson			1.5	8.1	21.8	15.1
Juneau						1.5
Kenosha	1.0	2.1	3.4	2.4	7.1	
Kewaunee		2.5		1.5	3.4	7.1
La Crosse			1.3	1.7	2.0	3.7
Lafayette			3.3	1.0	3.3	3.1
Langlade						1.5
Manitowoc				3.3	7.3	14.6
Marathon						2.5
Milwaukee				1.5	1.5	
Monroe				2.3	2.7	3.6
Outagamie				2.7	3.1	6.8
Ozaukee		1.8	2.3	8.9	39.1	47.7
Pepin			1.6	1.5	6.1	24.1
Pierce			2.4	3.0	12.2	29.3
Polk				1.5	1.5	3.9
Racine			1.0	1.6	5.0	1.4
Richland						3.3
Rock		2.3	5.2	13.7	19.9	10.8
St. Croix			2.5	1.5	1.0	7.3
Sauk				1.6	1.4	2.2
Shawano						2.3
Sheboygan			1.8	7.0	18.5	25.8
Trempealeau			1.6	4.1	1.9	4.6
Vernon			1.6	4.0	5.3	5.9
Walworth	1.8	1.6	4.4	8.9	23.4	10.9
Washington		2.3	2.3	8.7	47.3	65.0
Waukesha	2.7		2.0	10.6	35.3	20.5
Waupaca				1.5	1.1	1.9
Winnebago				1.1	3.8	5.8
Wood						1.6
State	0.7	0.9	1.6	3.8	9.0	9.0

TABLE XII.

Per capita production of rye in the counties of the wheat area in Wisconsin,
producing one bushel or more per capita.

[Federal Census, 1849 to 1899.]

Counties.	1849. Bushels.	1859. Bushels.	1869. Bushels.	1879. Bushels.	1889. Bushels.	1899. Bushels.
Adams		3.7	9.2	16.4	26.8	24.9
Barron			1.1			2.2
Brown				1.3	4.9	2.7
Buffalo			1.0		2.7	2.8
Burnett					2.3	2.1
Calumet					3.9	1.7
Chippewa		1.3				2.6
Clark		1.7				3.1
Columbia			1.4	2.3	4.9	4.4
Crawford				1.3	2.3	1.6
Dane				1.6	1.3	
Dodge						1.1
Door		1.9		1.1	2.7	5.3
Dunn			1.3	1.0	2.6	3.3
Eau Claire					2.3	3.8
Grant				1.7	2.8	2.4
Green			1.1	2.3	2.9	1.3
Green Lake		1.4	1.3	2.3	5.6	5.1
Iowa					2.0	2.3
Jackson			1.1	1.0	2.6	5.8
Jefferson			1.0	2.0	2.5	2.2
Juneau			1.4	2.9	4.1	4.4
Kenosha			1.0	1.0		
Kewaunee		10.9	2.1	2.9	6.3	7.0
La Crosse			1.1	1.7	1.9	1.4
Lafayette				1.2	1.8	1.1
Langlade						1.0
Manitowoc		1.5	2.3	2.3	6.1	6.2
Marathon					1.3	2.3
Marquette						1.0
Marquette		6.5	9.6	14.6	18.9	21.8
Monroe				1.3	3.9	3.6
Oconto					1.1	1.9
Outagamie					2.3	1.1
Ozaukee		8.9	4.6	2.1	2.7	3.2
Pepin			1.0	2.6	4.1	5.7
Pierce					2.7	5.5
Polk					3.9	2.7
Portage		1.1	5.5	6.3	7.5	7.4
Racine				1.1		1.0
Richland					1.6	1.4
Rock			3.1	2.2	1.6	1.6
St. Croix					4.1	6.5
Sauk			1.0	2.3	4.9	3.1
Shawano			1.0	2.3	1.9	2.5
Sheboygan		2.2	2.9	2.4	2.7	2.6
Trempealeau					3.6	3.3
Walworth			1.6	1.3		
Washington	2.2	2.3	2.2	2.7	3.8	3.8
Waukesha		2.2	2.3	2.3	1.9	4.3
Waupaca		1.1	1.6	2.3	4.2	5.3
Waushara		4.4	5.7	12.6	1.6	1.7
Winnebago					1.8	
Wood			1.8	1.9	2.1	2.3
State	0.3	1.1	1.3	1.7	2.5+	2.5-

TABLE XIII.

Per capita production of oats in the counties of the wheat area in Wisconsin.

[Federal Census, 1849 to 1899.]

Counties.	1849. Bushels.	1850. Bushels.	1860. Bushels.	1879. Bushels.	1889. Bushels.	1899. Bushels.
Adams	10.2	6.3	13.4	19.4	36.9	33.3
Barron			23.8	23.6	23.1	33.8
Brown	2.9	2.2	6.1	10.3	25.1	33.6
Buffalo		6.4	28.4	34.1	64.4	96.3
Burnett			1.9	6.8	11.5	13.3
Calumet	4.8	9.0	14.2	18.9	39.3	62.2
Chippewa	27.0	11.3	30.1	31.5	48.4	45.8
Clark		5.3	10.1	13.7	25.7	30.7
Columbia	12.5	21.7	28.5	30.9	64.4	75.9
Crawford		4.8	12.3	23.9	49.6	53.5
Dane	14.6	20.5	23.0	43.1	61.6	71.4
Dodge	10.6	15.5	19.3	25.3	41.3	64.3
Door		1.8	4.5	10.8	15.8	23.4
Dunn		11.5	24.6	34.6	51.9	63.0
Eau Claire		13.0	27.3	23.9	39.9	43.3
Fond du Lac	6.9	13.3	19.0	23.4	45.7	65.1
Grant	12.6	22.8	27.7	49.8	32.6	37.5
Green	17.8	18.1	31.4	62.1	30.5	36.1
Green Lake		21.6	22.8	22.1	50.7	79.1
Iowa	11.5	20.0	23.7	55.3	105.7	108.3
Jackson		27.2	35.2	30.9	65.6	79.6
Jefferson	7.7	10.3	13.8	19.4	32.8	53.2
Juneau		9.1	15.9	25.6	44.9	46.9
Kenosha	21.5	17.4	27.3	45.4	45.3	50.4
Kewaunee		11.7	7.2	16.5	24.4	34.9
La Crosse		16.1	14.1	15.9	23.8	24.9
Lafayette	15.2	34.0	67.0	80.8	114.0	108.1
Langlade				8.1	7.4	15.8
Lincoln				6.4	8.9	5.7
Manitowoc	1.4	2.7	11.6	18.6	27.8	37.8
Marathon		2.7	13.0	10.9	19.6	19.6
Marquette				3.2	5.6	8.9
Marquette	7.6	7.0	9.6	14.7	32.3	44.5
Milwaukee	4.0	8.4	3.3	3.6	2.8	2.9
Monroe		11.1	17.6	26.3	50.5	57.6
Oconto		0.9	3.0	6.3	21.1	32.0
Outagamie		5.9	10.8	17.5	34.4	45.1
Ozaukee		14.0	16.6	26.4	34.9	54.0
Peplin		5.7	17.0	21.7	35.3	56.5
Pierce		15.3	17.2	22.8	56.5	59.3
Polk		10.7	15.3	18.8	37.5	49.7
Portage	2.7	11.3	14.4	12.7	29.8	24.9
Racine	11.5	10.5	14.7	23.2	27.6	30.2
Richland	2.7	6.3	11.7	19.9	40.8	50.4
Rock	23.5	25.0	30.0	45.5	45.8	51.5
St. Croix	1.1	13.2	40.5	38.4	100.6	91.6
Sauk		17.4	21.3	32.8	59.8	75.4
Shawano		1.6	8.7	13.0	24.6	31.1
Sheboygan	4.4	9.8	13.1	19.7	27.1	34.0
Trempealeau		16.3	22.5	35.0	34.3	105.6
Vernon		20.8	23.8	35.7	68.0	66.8
Walworth	21.1	20.3	26.8	38.8	40.4	73.3
Washington	5.3	18.0	17.2	24.5	37.7	52.8
Waukesha	12.9	14.9	17.7	28.0	39.9	62.9
Waupaca		3.9	7.1	13.0	31.6	37.5
Waushara		6.9	9.4	19.6	45.1	41.6
Winnebago	2.9	11.9	9.7	13.0	26.6	33.8
Wood		1.2	4.4	6.0	11.2	12.8
State	11.2	14.3	19.1	25.0	36.0	40.6

TABLE XIV.

Per capita production of corn in counties of the wheat area in Wisconsin.

[Federal Census, 1840 to 1890.]

Counties.	1840. Bushels.	1850. Bushels.	1860. Bushels.	1870. Bushels.	1880. Bushels.	1890. Bushels.
Adams	5.1	7.7	17.3	32.4	50.4	63.1
Barron			1.8	2.7	6.1	4.8
Brown	1.8	0.7	0.5	2.3	1.8	3.3
Buffalo		13.3	17.5	19.1	34.3	45.2
Burnett			0.7	2.1	5.7	6.9
Calumet	6.0	5.2	8.4	9.7	9.9	17.8
Chippewa	15.1	1.7	3.9	9.1	12.4	8.6
Clark		5.0	2.7	6.6	5.1	7.1
Columbia	8.1	10.9	18.3	44.2	46.6	74.6
Crawford		7.9	20.0	36.4	33.3	48.2
Dane	7.3	12.9	17.6	56.0	39.6	68.7
Dodge	6.6	5.7	13.3	24.3	23.5	45.1
Door		1.7	0.3	0.9	0.7	2.3
Dunn		7.9	7.5	18.8	31.3	29.8
Eau Claire		8.0	6.5	12.3	14.3	14.6
Fond du Lac	5.1	4.4	6.2	15.6	13.5	29.2
Grant	12.4	27.9	45.9	90.0	73.2	100.9
Green	15.6	27.3	40.1	100.6	70.2	118.5
Green Lake		12.4	19.1	34.9	33.2	53.2
Iowa	3.5	16.2	23.7	70.8	56.6	84.9
Jackson		8.7	8.9	19.6	27.0	29.9
Jefferson	5.3	8.3	17.0	30.8	32.6	51.9
Juneau		6.5	9.3	21.1	17.6	26.9
Kenosha	9.3	11.3	20.4	46.2	27.3	33.2
Kewaunee		4.2		0.1	0.4	0.4
La Crosse		14.1	9.4	14.0	16.3	17.9
Lafayette	7.9	25.6	57.1	117.7	98.0	136.2
Manitowoc		0.1		0.5	0.8	2.1
Marathon		1.1		1.1	0.7	2.1
Marquette	3.0	10.6	14.4	37.8	46.1	64.1
Milwaukee	4.9	1.4	1.8	1.6	0.7	1.1
Monroe	1.2	9.9	11.0	19.1	22.3	24.2
Oconto		0.6	0.3	2.5	2.1	6.4
Outagamie		4.6	3.0	11.9	9.1	15.6
Ozaukee		1.9	1.8	7.2	6.2	12.1
Pepin		11.6	23.2	26.4	33.7	44.8
Pierce		12.9	8.1	17.6	24.5	26.3
Polk		6.8	3.1	4.5	13.2	9.9
Portage		5.1	6.0	15.7	16.2	13.1
Racine	5.2	5.7	14.1	17.9	12.1	18.8
Richland	12.3	23.4	31.9	48.0	40.6	64.7
Rock	14.5	15.6	29.1	65.8	43.4	67.3
St. Croix	1.7	8.6	3.8	9.8	21.0	11.8
Sauk		13.7	17.3	33.5	33.3	53.2
Shawano		2.2	2.5	5.3	5.3	8.6
Sheboygan	0.9	2.5	2.3	9.3	7.9	12.3
Trempealeau		13.1	13.1	25.7	39.6	36.9
Vernon		15.4	15.6	30.4	36.8	23.1
Walworth	12.0	12.3	31.9	59.9	42.2	62.9
Washington	1.8	3.4	9.0	13.7	14.1	29.2
Waukesha	4.0	7.2	13.3	23.1	21.4	23.2
Waupaca		7.5	6.6	14.3	16.2	15.5
Waushara		15.7	12.7	31.8	45.7	43.4
Winnebago	3.4	6.0	5.1	13.5	12.3	15.6
State	6.5	9.7	14.2	26.0	20.2	26.3

TABLE XV.

Per capita production of potatoes in counties of the wheat area in Wisconsin.

[Federal Census, 1849 to 1899]

Counties.	1849. Bushels.	1859. Bushels.	1869. Bushels.	1879. Bushels.	1889. Bushels.	1899. Bushels.
Adams	4.0	4.8	9.7	8.8	28.8	77.1
Barron			8.4	6.0	17.8	28.5
Brown	4.0	2.5	2.7	4.7	5.9	4.4
Buffalo		15.5	5.9	7.7	14.7	11.9
Burnett			2.7	4.7	15.0	34.0
Calumet	5.2	5.3	3.8	4.8	5.9	6.8
Chippewa	14.1	6.1	8.1	7.0	16.1	18.5
Clark		11.3	5.0	9.2	9.4	10.8
Columbia	5.3	4.8	7.0	7.0	13.9	24.8
Crawford		3.0	6.1	8.9	9.3	7.9
Dane	6.4	2.9	6.5	5.4	5.9	7.5
Dodge	8.2	4.3	7.5	6.4	8.3	11.4
Door		8.1	8.8	6.6	8.0	19.6
Dunn		10.9	4.7	7.0	16.6	25.6
Eau Claire		9.0	2.7	3.7	9.2	9.9
Fond du Lac	5.9	4.3	5.2	5.8	8.3	11.8
Grant	2.8	4.8	7.5	8.4	10.1	9.9
Green	1.9	3.7	7.8	6.5	6.9	6.7
Green Lake		5.2	6.9	6.3	9.3	17.3
Iowa	3.0	4.5	5.9	6.9	8.1	7.8
Jackson		8.7	5.0	4.9	10.9	10.9
Jefferson	3.9	3.5	8.7	5.9	7.8	7.9
Juneau		4.5	7.9	11.7	18.7	25.6
Kenosha	6.4	5.9	10.2	6.5	8.8	7.1
Kewaunee		15.2	5.8	5.3	7.1	7.7
La Crosse		8.4	3.2	4.3	6.2	4.6
Lafayette	1.6	5.1	8.8	8.3	8.4	7.7
Langlade				15.8	7.0	7.4
Lincoln				6.6	3.8	4.7
Manitowoc	1.9	2.0	3.2	4.8	6.3	6.5
Marathon	4.0	7.8	3.7	7.1	8.9	10.4
Marinette				5.5	5.5	8.7
Marquette	4.2	7.3	8.5	9.9	16.9	36.9
Milwaukee	2.3	2.3	2.4	2.7	2.2	3.1
Monroe		4.9	5.5	7.3	15.7	10.5
Oconto		3.8	4.3	9.2	8.1	10.1
Outagamie		7.3	3.5	7.3	6.9	9.4
Ozaukee		6.0	5.4	9.7	10.0	17.4
Pepin		8.2	5.8	7.6	13.9	10.1
Pierce		11.0	4.7	7.4	20.2	10.8
Polk		12.1	4.5	6.6	16.2	18.7
Portage	1.0	6.4	10.6	12.4	58.4	67.1
Racine	3.9	4.5	6.1	5.5	7.2	8.1
Richland	2.1	5.2	6.9	6.6	8.7	6.9
Rock	4.9	4.5	11.3	6.5	6.4	6.1
St. Croix	2.1	10.4	5.6	7.6	25.8	11.0
Sauk		5.8	8.8	10.2	12.9	23.6
Shawano		4.8	6.4	6.5	8.2	11.4
Sheboygan	4.4	5.5	4.3	5.7	5.7	9.1
Trempealeau		13.1	4.4	5.4	12.2	9.9
Vernon		5.4	4.4	6.4	12.6	8.8
Walworth	5.6	4.5	11.3	6.3	7.9	7.4
Washburn					3.5	9.4
Washington	6.8	4.9	8.0	8.0	10.4	16.0
Waukesha	6.2	7.0	14.3	11.5	13.7	21.4
Waupaca		6.9	6.2	11.9	47.1	49.7
Waushara		7.1	8.1	9.4	49.9	119.3
Winnebago	3.3	4.6	3.8	4.5	5.0	5.2
Wood		2.5	7.8	6.8	8.4	10.6
State	4.6	4.9	6.8	6.5	9.9	11.9

TABLE XVI.

Per capita production of hay in counties of the wheat area in Wisconsin, producing 0.90 tons or more per capita.

[Federal Census, 1849 to 1900]

Counties.	1849. Tons.	1859. Tons.	1869. Tons.	1879. Tons.	1889. Tons.	1899. Tons.
Adams		1.83	1.56	2.02	2.45	2.58
Barron					1.68	2.33
Brown					1.09	1.28
Buffalo		1.75	1.48	1.72	2.76	2.98
Burnett				1.64	1.87	2.42
Calumet			1.07	1.08	2.11	1.71
Chippewa	2.11		0.99		1.38	1.88
Clark		1.43	1.11	1.79	1.92	2.54
Columbia	1.41	1.49	1.53	2.56	2.98	2.17
Crawford			0.94	1.29	1.83	2.50
Dane	1.80	1.39	1.36	2.04	2.54	1.79
Dodge	1.33	1.31	1.50	2.06	2.81	2.72
Door					1.78	2.01
Dunn		0.97	1.30	1.33	1.92	2.35
Eau Claire		0.96			1.16	1.45
Fond du Lac	0.97	1.44	1.64	1.33	2.59	1.73
Grant		1.07	1.08	1.66	2.32	2.38
Green	1.24	1.97	1.88	3.09	3.90	2.82
Green Lake		2.09	2.25	2.35	2.61	2.49
Iowa		1.49	1.56	2.29	3.25	3.55
Jackson		0.95	0.90	1.33	2.29	2.57
Jefferson	0.93	1.13	1.47	2.23	3.86	2.46
Juneau		1.06	1.25	1.60	1.74	2.23
Kenosha	2.25	2.64	3.23	3.39	3.84	2.58
Kewaunee		1.29			2.09	3.18
La Crosse		1.26		0.93	1.12	1.17
Lafayette		1.66	1.71	2.59	3.65	2.96
Langlade					0.93	1.33
Manitowoc				0.90	1.85	1.66
Marathon					1.29	1.70
Marquette		1.84	2.51	2.92	3.05	5.67
Monroe		0.98	1.23	1.80	2.17	2.44
Oconto					1.18	1.70
Outagamie			1.01	0.92	1.12	1.22
Ozaukee			0.95	1.51	2.78	1.93
Pepin		0.90	1.40	1.34	1.85	1.76
Pierce				1.25	1.88	2.15
Polk			0.90	1.09	1.79	2.76
Portage			0.92		1.22	1.57
Racine	0.97	1.35	1.61	1.65	1.62	1.20
Richland	1.25	0.97	1.10	1.72	2.65	3.51
Rock	1.11	1.11	1.33	1.96	2.38	1.15
St. Croix				1.00	2.09	2.61
Sauk		1.24	1.24	1.72	2.01	2.12
Shawano					1.15	1.44
Sheboygan			1.24	1.39	1.75	1.36
Trempealeau		1.69	1.75	2.06	3.44	3.28
Vernon			1.09	1.50	2.38	2.70
Walworth	1.53	1.00	2.08	3.00	3.65	2.14
Washington			0.96	1.40	2.35	1.66
Waukesha	1.17	1.31	1.43	2.19	2.55	2.06
Waupaca			0.98	1.29	1.66	2.09
Waushara		1.50	1.19	2.04	2.42	2.74
Winnebago		1.53	1.27	1.39	1.43	1.22
Wood			0.97	1.06	1.29	1.53
State	0.90	1.10	1.23	1.45	1.23	1.58

TABLE XVII.

Per capita number of horses in the counties of the wheat area in Wisconsin having twenty or more horses per hundred of population.

[Federal Census, 1849 to 1899]

Counties.	1849.	1859.	1869.	1879.	1889.	1899.
Adams			0.25	0.34	0.47	0.59
Barron						.28
Brown						.22
Buffalo			.27	.36	.45	.52
Burnett						.23
Calumet			.28	.33	.37	.45
Chippewa	0.33				.23	.27
Clark					.28	.36
Columbia		0.31	.34	.39	.49	.45
Crawford			.24	.26	.43	.44
Dane		.30	.37	.43	.43	.38
Dodge			.29	.36	.43	.41
Door					.32	.33
Dunn				.26	.30	.40
Eau Claire						.23
Fond du Lac			.25	.29	.35	.35
Grant		.24	.37	.43	.54	.55
Green	.31	.28	.41	.46	.54	.51
Green Lake		.30	.31	.37	.41	.40
Iowa		.21	.40	.44	.52	.54
Jackson			.23	.27	.32	.44
Jefferson			.25	.30	.35	.33
Juneau				.21	.31	.35
Kenosha	.27		.36	.35	.43	.29
Kewaunee				.23	.31	.38
Lafayette	.31		.46	.50	.65	.63
Manitowoc				.25	.30	.29
Marathon						.22
Marquette			.27	.36	.43	.43
Monroe				.31	.36	.39
Oconto						.27
Outagamie				.21	.21	.23
Ozaukee			.24	.23	.36	.32
Pepin			.21	.27	.35	.40
Pierce				.29	.36	.41
Polk			.28	.20	.25	.33
Portage					.22	.27
Racine		.30	.30	.23	.23	
Richland			.24	.26	.45	.46
Rock		.26	.26	.26	.42	.34
St. Croix			.27	.23	.23	.26
Sauk			.25	.23	.40	.41
Shawano					.21	.28
Sheboygan			.20	.27	.24	.23
Trempealeau			.26	.25	.43	.46
Vernon			.25	.27	.43	.46
Walworth		.23	.43	.27	.49	.42
Washington			.24	.27	.43	.41
Waukesha		.23	.24	.25	.39	.35
Waupaca				.21	.29	.33
Waushara				.23	.45	.51
Winnebago				.20		
State	.10	.15	.24	.27	.27	.27

TABLE XVIII.

Per capita number of milch or dairy cows in the counties of the wheat area in Wisconsin having thirty or more cows per hundred of population.

[Federal Census, 1849 to 1899]

Counties.	1849.	1859.	1869.	1879.	1889.	1899.
Adams			0.81	0.58	0.68	0.68
Barron					.34	.39
Brown					.33	.38
Buffalo			.85	.48	.71	.86
Burnett					.47	.58
Calumet		.30	.34	.44	.31	.31
Chippewa	.39				.30	.32
Clark				.30	.43	.56
Columbia		.34	.33	.48	.59	.68
Crawford				.35	.56	.68
Dane	.30	.32	.34	.49	.68	.75
Dodge		.31	.35	.48	.77	.98
Door					.43	.47
Dunn			.30	.35	.47	.53
Fond du Lac		.30	.31	.36	.67	.73
Grant			.35	.45	.74	.80
Green		.41	.49	.87	1.32	1.49
Green Lake		.36	.33	.39	.48	.67
Iowa	.30	.31	.41	.57	.95	1.23
Jackson				.35	.60	.63
Jefferson			.34	.57	.89	1.06
Juneau				.32	.42	.52
Kenosha		.45	.54	.58	.76	.64
Kewaunee				.36	.65	.73
La Crosse						.33
Lafayette	.32	.36	.46	.66	.92	1.24
Manitowoc	.50			.39	.68	.59
Marathon						.36
Marquette		.42	.43	.49	.56	.69
Monroe				.35	.49	.65
Oconto						.38
Ontagamie				.31	.43	.48
Ozaukee		.31	.36	.51	.80	.72
Pepin					.50	.52
Pierce					.52	.46
Polk					.55	.70
Portage					.30	.35
Racine		.33			.37	.33
Richland				.41	.72	.86
Rock		.31	.33	.46	.52	.56
St. Croix				.30	.50	.50
Sauk			.30		.60	.76
Shawano				.30	.34	.59
Sheboygan	.66		.33	.56	.74	.61
Trempealeau			.38	.44	.98	.76
Vernon			.30	.39	.59	.58
Walworth		.34	.38	.56	.92	1.10
Washington		.31	.35	.46	.71	.81
Waukesha		.35	.37	.47	.58	.66
Waupaca				.34	.44	.62
Waushara		.30		.50	.75	.79
Winnebago					.32	.36
Wood						.33
State	.31	.36	.30	.36	.47	.43

TABLE XIX.

Per capita number of "other cattle" in the counties of the wheat area in Wisconsin having thirty or more cattle per hundred of population.

[Federal Census, 1849 to 1899]

Counties.	1849.	1859.	1869.	1879.	1889.	1899.
Adams			0.51	0.88	0.91	0.51
Barron				.45	.46	
Brown					.30	
Buffalo		.81	.73	.65	.90	.61
Burnett				.39	.57	.38
Calumet		.33		.48	.58	.57
Chippewa	.57			.34	.34	.30
Clark		.81		.43	.55	.49
Columbia		.44	.34	.73	.87	.65
Crawford			.40	.58	.88	.60
Dane	.37		.34	.63	.73	.49
Dodge		.32		.56	.63	.46
Door					.47	.46
Dunn			.34	.49	.63	.37
Fond du Lac		.36		.45	.60	.37
Grant		.44	.59	.84	1.37	1.01
Green	.38	.55	.65	1.21	1.19	.98
Green Lake		.55	.35	.53	.66	.51
Iowa		.45	.69	1.09	1.65	1.38
Jackson				.60	.74	.47
Jefferson		.32	.32	.52	.49	.36
Juneau				.47	.57	.35
Kenosha	.43	.47	.54	.67	.51	.30
Kewaunee		.30		.41	.61	.57
La Crosse				.32	.30	
Lafayette	.30	.54	.81	1.25	1.85	1.52
Manitowoc				.37	.45	.36
Marathon			.31	.32	.36	.35
Marquette		.52	.53	.79	.85	.71
Monroe			.30	.50	.72	.38
Oconto					.37	.36
Outagamie		.39		.42	.42	.31
Ozaukee				.43	.49	.31
Pepin			.49	.45	.51	.36
Pierce			.30	.50	.63	.46
Polk				.40	.71	.52
Portage				.37	.31	
Racine	.35	.33		.32		
Richland			.36	.66	.91	.65
Rock	.35	.38	.38	.70	.65	.41
St. Croix				.32	.57	.41
Sauk		.33	.33	.62	.67	.47
Shawano				.38	.58	.33
Sheboygan				.48	.33	
Trempealeau		.37	.38	.66	1.04	.55
Vernon		.32	.49	.55	.98	.57
Walworth	.45	.39	.42	.62	.58	.49
Washington		.33		.49	.61	.39
Waukesha	.31	.33		.42	.39	
Waupaca				.44	.52	.37
Waushara		.37		.63	.59	.39
Winnebago				.30		
Wood					.31	
State	.35	.39	.31	.47	.49	.33

TABLE XX.

Per capita number of sheep in the counties of the wheat area in Wisconsin having forty or more sheep per hundred of population.

[Federal Census, 1849 to 1899]

Counties.	1849.	1859.	1869.	1879.	1889.	1899.
Adams			1.2	0.7	0.8	0.6
Barron					.5	.6
Buffalo			.5	.6	.7	1.1
Burnett					.5	
Calumet			.8	.5		
Clark				.5	.4	.8
Columbia		.5	1.7	2.6	1.9	1.5
Crawford			.6	.6	.7	.3
Dane	.5	.4	1.2	1.5	.6	.5
Dodge		.6	1.2	1.5	1.0	.7
Dunn			.4	.5	.7	.9
Fond du Lac		.7	1.4	1.9	1.5	1.2
Grant			.7			.7
Green	.6	.5	1.7	2.3	.5	.8
Green Lake		.8	2.4	3.4	2.7	1.9
Iowa			.6	.8	.5	.8
Jackson			.4			.6
Jefferson		.7	1.4	1.5	.6	
Juneau			.7	.6	.5	.5
Kenosha	1.3	1.5	2.7	4.8	3.1	1.0
Kewaunee					.4	.4
La Crosse			.5			
Lafayette			.8	1.0	.6	1.2
Manitowoc			.5	.4		
Marathon					1.5	.4
Marquette		.7	2.0	1.9	1.5	1.4
Monroe			.7	.7	.9	.8
Outagamie			.6	.7		
Pepin			.6	.6	.6	.7
Pierce			.6		1.0	1.3
Polk					.6	.4
Portage			.8	.7		
Racine	.7	.6	1.4	1.6	.7	
Richland			1.2	1.2	1.9	2.5
Rock	.6	.7	1.6	1.5	.6	.5
St. Croix					.6	.6
Sauk			.8	1.0	.8	.9
Shawano				.4	.5	.5
Sheboygan			1.0			
Trempealeau			.9	.7	.7	1.0
Vernon			1.1	1.1	1.5	1.5
Walworth	1.3	1.5	2.7	4.5	2.2	1.0
Washington			.7	.7	.7	.5
Waukesha	.6	1.2	2.5	2.2	1.7	1.1
Waupaca			.7	.9	.5	.4
Waushara			1.0	1.5	1.0	.9
Winnebago		.5	1.0	1.0	.5	
State	.4	.4	1.0	1.0	.6	.5

TABLE XXI.

Per capita number of swine in the counties of the wheat area of Wisconsin having fifty or more swine per hundred of population.

[Federal Census, 1840 to 1890]

Counties.	1840.	1850.	1860.	1870.	1880.	1890.
Adams				1.0	0.9	1.0
Buffalo		1.1	.6	.7	1.5	2.6
Calumet	.7	.6	.5	.5	.6	.9
Chippewa	1.5?					
Clark		.6				
Columbia	.6	(.4)		1.5	1.2	2.5
Crawford			.7	1.5	1.2	1.2
Dane	.8	(.4)	.5	1.8	1.6	2.2
Dodge	.7	(.4)		.8	1.0	1.2
Dunn		.5		.6	.8	1.3
Eau Claire						.6
Fond du Lac	.5			.5	.8	1.1
Grant	.9	.8	1.2	2.6	2.7	4.1
Green	.9	.9	1.5	2.5	2.1	4.4
Green Lake		(.4)		1.2	1.2	1.2
Iowa	.6	.8	1.1	2.4	2.8	2.0
Jackson				.6	.7	1.1
Jefferson				1.0	1.1	1.6
Juneau				.8	.8	1.0
Kenosha	.5	.5	.5	.9	.7	.9
Kewaunee		.5			.5	
La Crosse						.6
Lafayette	.5	.9	1.6	2.9	2.5	5.1
Marquette	.5		.5	1.1	1.0	1.5
Monroe		.5		.9	1.0	1.4
Outagamie		.6			.5	.8
Ozaukee		.5		.5	.5	.6
Peplin		.6	.6	.5	1.0	1.2
Pierce		.6		.5	.8	.9
Polk						.5
Portage				.5	.5	.5
Racine				.5	.5	.5
Richland		.7	.8	1.9	1.2	2.5
Rock	.7		.6	1.2	1.7	1.2
St. Croix					.8	.6
Sauk		.5	.6	1.2	1.6	2.2
Shawano					.5	.9
Sheboygan						.5
Trempealeau		.5			1.2	1.2
Vernon		.6	.8	1.4		1.5
Walworth	.7	.5	.7	1.7	(.9)	2.7
Washington	.5	.5	.5	.8	1.1	1.1
Waukesha	.5	.5	.6	1.0	1.0	.9
Waupaca					.6	.7
Waushara		.5		.9	1.0	1.2
Winnebago						.6
State	.5	.4	.5	.9	.8	1.0

TABLE XXII.

Production of tobacco in the important tobacco-producing counties of the wheat area in Wisconsin.

[Federal Census, 1849 to 1899; State Census, 1904.]

Counties.	1800. ¹ Pounds.	1879. Pounds.	1899. Pounds.	1899. ² Pounds.	1904. ³ Pounds.
Chippewa				5,530	130,500
Columbia			597,423	2,960,540	3,142,475
Crawford		14,645	59,822	1,500,830	2,309,447
Dane	229,568	5,371,242	10,040,199	21,233,300	14,902,295
Dunn				7,810	425,853
Grant		34,350	48,990	166,300	294,850
Green		117,571	277,708	419,470	238,400
Jackson					224,424
Jefferson	14,055	262,501	679,134	847,330	305,224
Juneau				16,900	226,575
La Crosse				33,850	153,050
Lafayette		18,800	18,385	28,340	5,750
Monroe				165,700	656,729
Pierce			18,365	5,690	26,150
Richland	9,126	11,814		167,140	423,322
Rock	845,508	4,643,870	7,069,966	13,049,700	6,284,005
Trempealeau					211,446
Vernon		35,170	458,750	4,769,520	7,483,222
Walworth	46,136	9,360	44,022	41,250	9,000
State	960,813	10,608,423	19,389,166	45,500,480	37,651,498

¹ The total production of tobacco in 1859 was 87,340 lbs., of which Rock and Walworth counties produced 23,340 and 26,400 lbs., respectively. Only 1,268 lbs. of tobacco were produced in Wisconsin in 1849.

² Dodge, Racine, and Sauk counties produced 29,770, 21,590, and 12,700 pounds respectively.

³ Barron, Buffalo, Dodge, Eau Claire, St. Croix, Shawano, and Waukesha counties produced 34,940, 39,130, 30,400, 21,140, 26,800, 10,000 and 15,000 pounds respectively.

TABLE XXIII.

Cash value of farms, per acre of improved land, in counties of the wheat area in Wisconsin at the Federal Census periods, 1840 to 1899.

Counties.	1850.	1880.	1870. ¹	1880.	1890.	1900. ²
Adams	\$35.59	\$15.92	\$31.31	\$17.85	\$26.02	\$26.57
Barron			20.18	31.50	35.19	43.47
Brown	48.39	30.06	40.94	34.38	42.31	64.53
Buffalo		33.82	32.60	27.59	22.96	41.44
Burnett			22.79	27.14	48.16	37.81
Calumet	46.11	34.98	49.90	53.50	64.79	80.56
Chippewa	15.63	21.72	26.58	30.96	41.17	36.72
Clark		49.25	57.43	32.30	54.50	69.34
Columbia	94.94	30.52	33.11	31.79	39.41	56.97
Crawford		38.93	29.13	28.33	26.31	37.18
Dane	21.65	33.76	42.53	34.10	49.06	70.41
Dodge	25.10	26.45	52.98	50.40	61.87	97.81
Door		39.76	29.96	36.30	34.73	44.94
Dunn		23.64	27.98	26.93	26.49	39.02
Eau Claire		34.50	30.57	26.97	26.12	32.56
Fond du Lac	28.58	30.19	48.04	48.11	54.18	78.88
Grant	30.67	30.58	34.06	28.27	36.73	58.41
Green	23.08	26.61	32.72	34.53	47.02	60.36
Green Lake		37.67	46.29	32.06	49.74	61.55
Iowa	30.68	34.83	39.25	29.58	33.54	50.38
Jackson		30.89	26.53	28.18	26.86	32.39
Jefferson	28.27	26.67	41.08	45.92	65.22	94.43
Juneau		28.32	27.24	25.85	32.32	44.02
Kenosha	38.97	32.14	34.18	33.55	55.61	77.28
Kewaunee		42.70	34.95	39.35	39.04	46.99
La Crosse		52.64	36.41	35.90	33.24	42.98
Lafayette	21.17	28.83	35.70	30.99	42.91	57.45
Langlade				51.09	77.04	56.61
Lincoln				52.18	64.42	59.30
Manitowoc	44.16	30.80	42.83	53.87	56.71	70.25
Marathon	21.86	38.05	39.02	46.24	51.09	59.16
Marquette				31.64	58.21	48.29
Marquette	27.89	22.60	21.61	19.88	31.69	38.51
Millwaukee	51.82	94.61	91.05	121.75	202.98	263.91
Monroe		39.41	37.98	31.19	29.22	43.66
Oconto		22.68	39.00	35.31	58.30	51.91
Outagamie		45.92	47.23	48.52	51.36	71.03
Ozaukee		37.10	49.33	66.82	81.77	94.47
Pepin		43.40	29.96	31.21	25.59	38.29
Pierce		38.15	34.90	37.92	36.41	45.80
Polk		36.26	45.67	41.29	34.95	43.53
Portage	13.78	29.63	24.01	21.22	29.44	37.56
Racine	28.13	31.33	38.71	43.78	38.36	36.10
Richland	41.36	43.32	35.26	31.06	35.26	44.60
Rock	21.22	42.56	42.02	46.76	60.33	72.47
St. Croix	17.08	34.99	28.21	34.62	31.46	38.77
Sauk		34.02	36.49	33.24	38.56	48.89
Shawano		53.34	35.73	36.87	44.56	55.73
Sheboygan	45.05	35.29	44.06	59.74	74.04	83.52
Trempealeau		31.91	26.59	25.50	23.35	37.73
Vernon		33.15	30.83	27.69	27.97	42.74
Walworth	25.72	31.84	49.57	44.71	63.80	86.80
Washburn					51.23	40.24
Washington	30.76	34.05	50.57	62.41	74.72	95.64
Waukesha	23.69	45.50	52.01	60.11	90.82	99.01
Waupaca		39.64	34.42	30.37	33.85	52.80
Waushara		25.79	26.74	23.64	26.51	35.73
Winnebago	37.76	45.94	49.40	50.56	57.19	74.80
Wood		40.48	30.88	30.65	51.16	55.23
State	\$27.29	\$35.00	\$40.73	\$38.36	\$48.76	\$61.01

¹ Reduced one-fifth to allow for depreciation of currency.² Including the value of buildings.

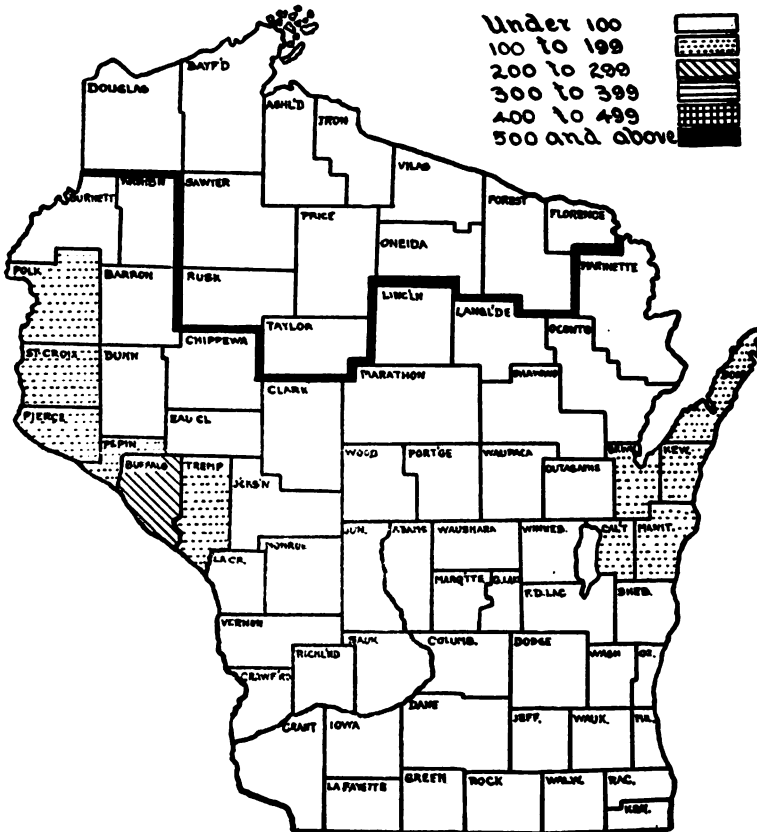


FIGURE 6. SPECIALIZATION DENSITY IN THE PRODUCTION OF WHEAT IN WISCONSIN IN 1899.

(Based on Table III.)

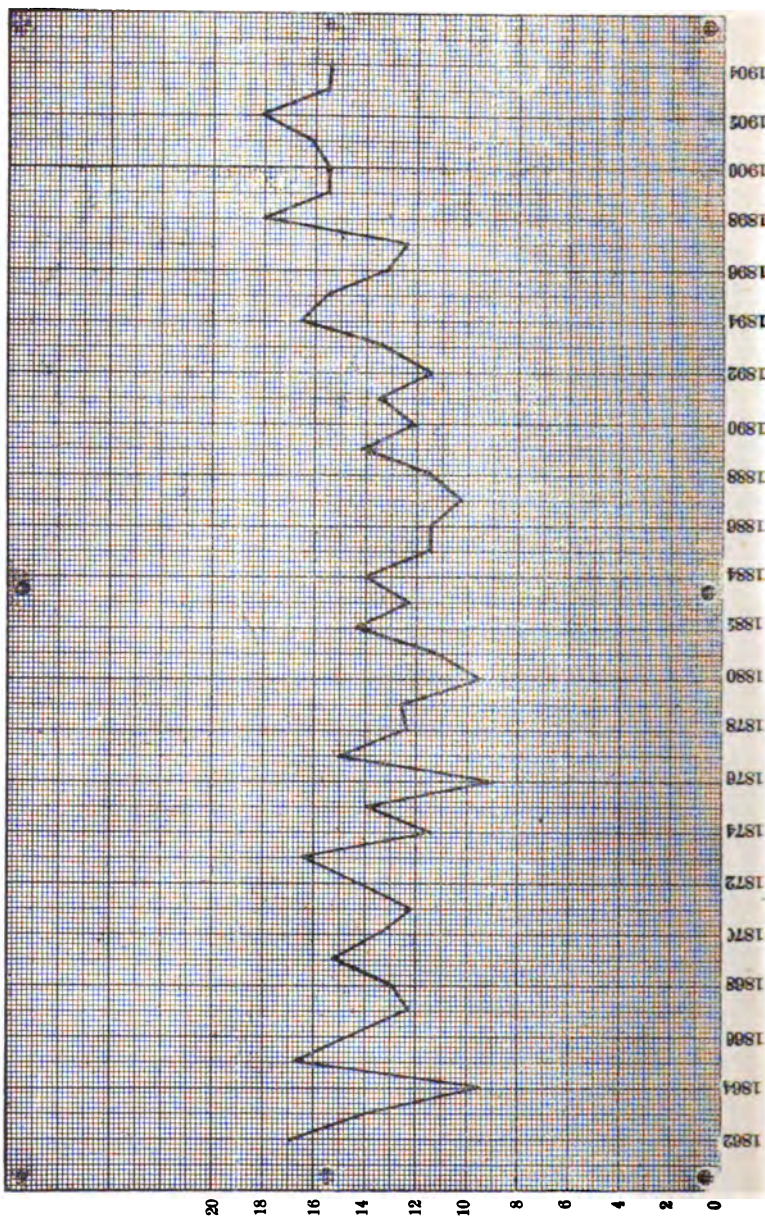
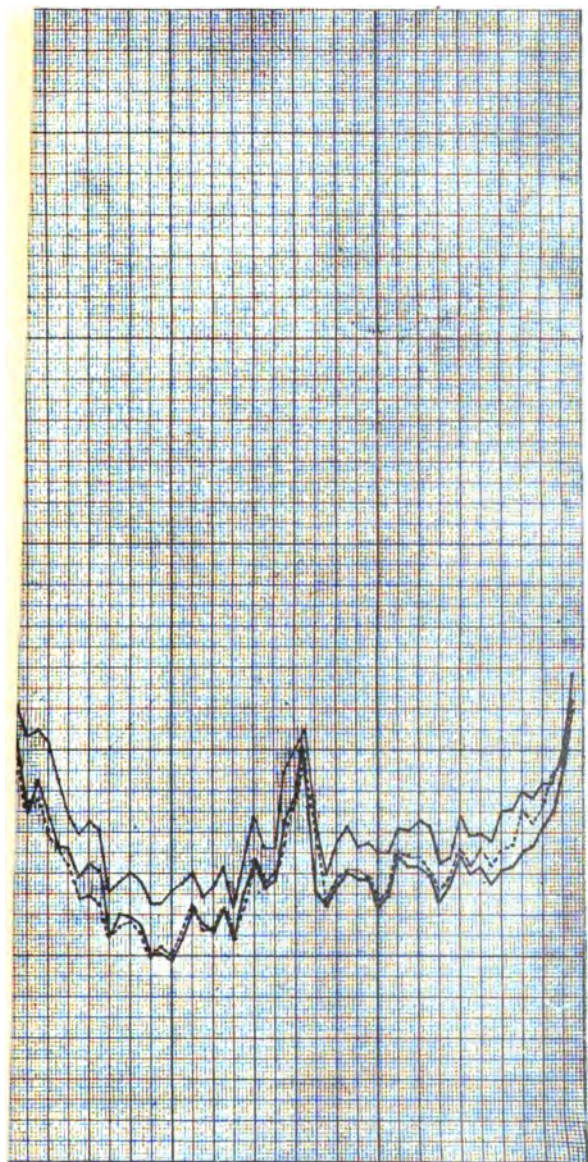


FIGURE 7.—GRAPHIC REPRESENTATION OF THE AVERAGE YIELD OF WHEAT PER ACRE IN WISCONSIN FOR THE YEARS 1862-1904.
(Based on the Estimate of the United States Department of Agriculture. See Table IV.)



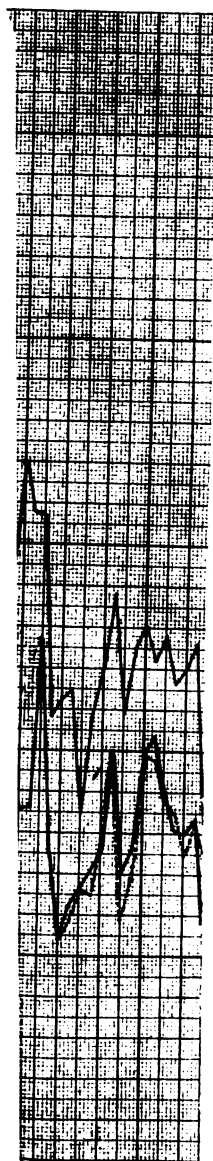
1895

1900

1905

APRIL, JULY, AND OCTOBER.

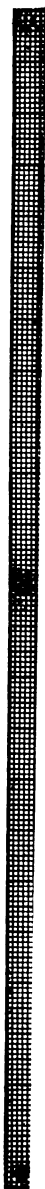
from 1840 to April, 1858, inclusive, while the
91, inclusive; for the remaining years the
the tables upon which it is based.



1890

THE PRICE OF WHI

Minimum quotation
New York City
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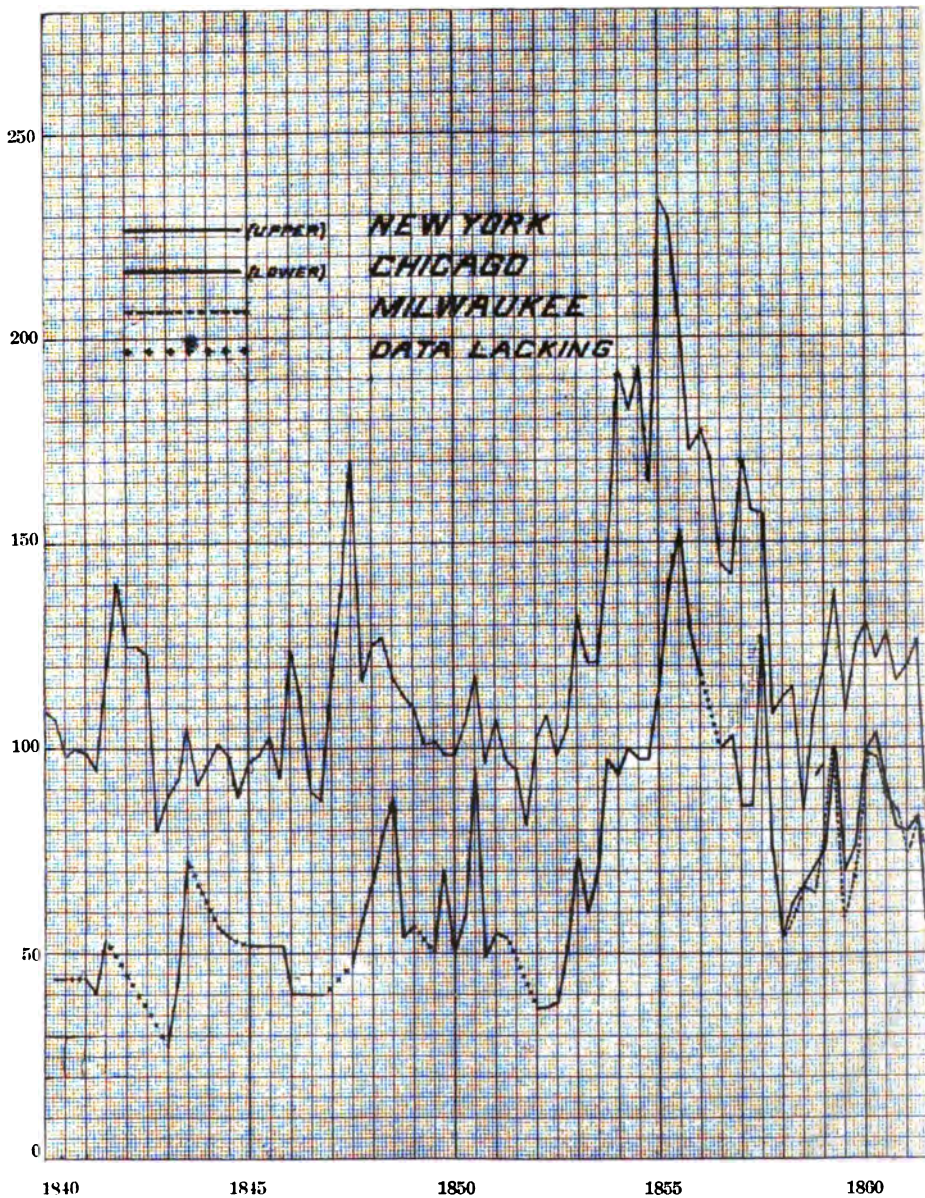


FIGURE 8.—GRAPHIC REPRESENTATION OF THE PRICE OF WHEAT

NOTE. The curve for Milwaukee prices is based on the minimum quotations for the first five years. For the remaining years, minimum quotations are taken for the remaining years. For New York City minimum quotations are followed. In studying this chart, caution should be



FIGURE 9.—MAP SHOWING THE CONSTRUCTION OF RAILROADS IN WISCONSIN,
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